

military illustrated

# modeller

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**Aircraft edition**

Eduard 1:48 Rufe Pt. 2 • Revell 1:48 Heinkel He 111 • Monogram 1:48 B-25D Mitchell conversion • Kotare 1:32 Spitfire Mk.I Early Preview and more...

## CLASSIC WILDCAT

Tamiya 1:48 F4F-4 Wildcat



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Model by Wayne Hui

Model by Jeremy Moore

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## KOTARE NEW RELEASE

Kotare has sent news of their next,  
and first non-Spitfire, release:

**K**otare is pleased to announce that our first non-Spitfire release will be...  
K32009 Kotare 1/32 Bf 109K-4 (in development for release late 2024/2025)  
This very late war Messerschmitt model has been developed using the most up to date reference material available to us.

We are always looking for more information, so if your readers think you can help make it even better, we welcome them to get in touch

Additionally, work is well underway on various other all-new subjects which we will announce in due course.

Thanks to Kotare for the information and images [www.kotare-models.com](http://www.kotare-models.com)



## AIRFIX REBOXINGS

### ■ A09182A Gloster Meteor F.8

Ranked at skill level 3, the 1:48 scale A09182A Gloster Meteor F.8 re-introduction includes two new schemes, allowing you to create two striking display teams of the past. This kit consists of 165 parts and measures a total wingspan of 236mm and 287mm in length.

In many respects, the Gloster Meteor could be regarded as Britain's jet powered equivalent of the Spitfire, the first of a new breed of fighter which would go on to patrol Britain's skies for many years following its squadron introduction in July 1944.

The later F.8 variant was arguably the most effective version of the Meteor and for the five years following its introduction, it would form the backbone of the Britain's fighter defence force.

With 1,183 aircraft built, the F.8 was both the final single seat fighter variant of the Meteor and the most heavily produced, arguably making this one of the most important British aircraft of the post war era.

### ■ A08019A Vickers Wellington Mk.IA/C

Ranked at skill level 3, the 1:72 scale A08019A Vickers Wellington Mk.IA/C re-introduction includes two new schemes depicting a Mk.IA variant from Royal Air Force Honington in 1939, and scheme B gives you the option to build something extremely different, a Mk.IC from (formerly) 311 Squadron in Luftwaffe markings. This kit consists of 141 parts and measures a total wingspan of 365mm and 272mm in length.

The most capable medium bomber of the day was the twin-engine Vickers Wellington, which first flew in 1936 and entered RAF service with No.99 Squadron at Mildenhall in October 1938. The production aircraft bore little resemblance to the prototype aircraft and compared to contemporary medium bombers already in service, the Wellington appeared to be much more advanced in design and an aircraft feared by any potential enemy. Its sleek monoplane design and heavy defensive armament placed the new Wellington as one of the most advanced and capable medium bombers in the world.

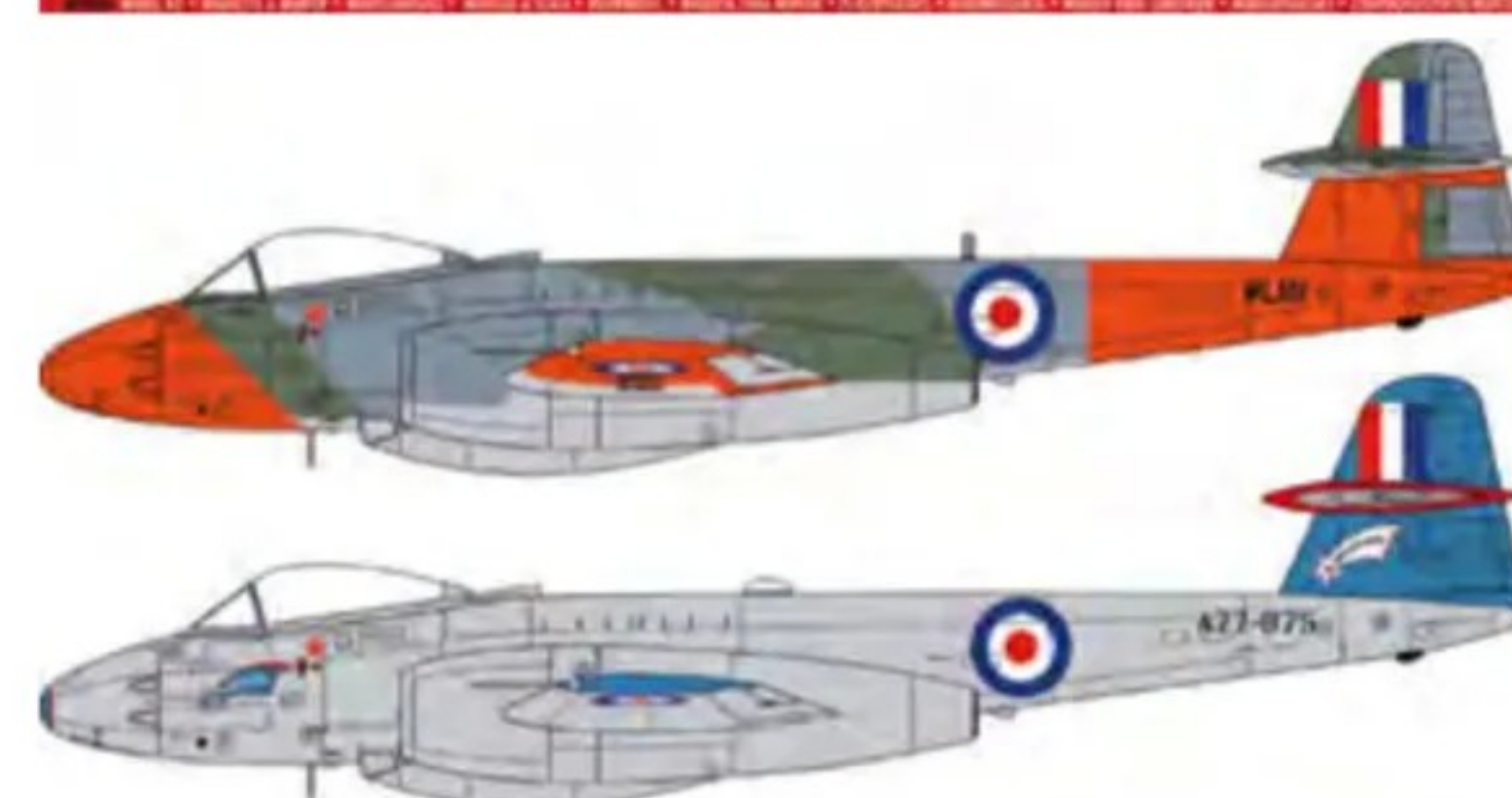
Perhaps the most significant feature of the Wellingtons design was the adoption of a geodetic construction method, which was developed by famous British engineer and inventor Barnes Wallis. Duralumin W-beams were used to form a metal lattice-work construction on to which wooden battens would be screwed, which would then allow the doped fabric outer skin of the aircraft to be attached.

The resultant fuselage was relatively light in weight but possessed great strength and whilst the method of construction posed challenges for companies engaged in manufacturing Wellington bombers, the inherent strength proved crucial when the aircraft was thrust into combat. Capable of withstanding significant battle damage, numerous RAF Wellingtons managed to bring their crews back home, when the other bombers would have failed to do so.

### ■ A06015A North American B-25C/D Mitchell

Ranked at skill level 3, the 1:72 scale A06015A North American B-25C/D Mitchell re-introduction includes two interesting new schemes depicting a USAAF North Africa B-25C Mitchell, and a Soviet B-25D, allowing you to create two diverse schemes of the B-25 variant. This kit consists of 166 parts and measures a total wingspan of 286mm and 224mm in length.

An extremely rugged and versatile aircraft, the Mitchell saw service as an anti-submarine patrol aircraft off the coast of Florida and as a strike bomber in the deserts of North Africa, proving successful at both. Some of the later versions of the B-25 became the most heavily armed aircraft of the war, with no less than 18 machine guns and an array of other offensive weaponry. With a solid nose housing 8 heavy guns, these aircraft were lethal gunships, capable of destroying anything in its line of fire.







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# HEINKEL OV

Gary Edmundson adds detail to ICM's Battle of Britain  
1:48 scale Heinkel He 111 H-3.





# ER BRITAIN



One of the most recognisable German bombers from the Second World War, the Heinkel He 111 was developed from an aircraft design for a passenger airliner from the 1930s. Tested as a medium bomber in the Spanish civil war, further development was carried out, and the He 111H-3 came into service in time for the Battle of Britain in 1940.

After acquiring the 1:48 Revell kit of the Heinkel He 111 a few years ago, my aim was to paint it up as a Battle of Britain aircraft. A bit of research showed that the more accurate model for this period was a much later release by ICM, and I sent an order off to Hannants for kit no. 48261.

With so much glazing around the cockpit and therefore most details visible, I also ordered the Eduard etched metal detail set for the nose section, and a set of canopy masks designed for the ICM kit. Since I couldn't find any after-market seat belts for this specific model, I sent off an order to HGW Models for their 1:48 seatbelts for the Ju.88, which I knew I could adapt to the project.

## CONSTRUCTION

While test-fitting the fuselage halves together I noticed that the locating pins did not all fit into their corresponding holes. Some of the holes had to be drilled out to a larger diameter to help rectify this. I also found this same situation on some of the main wing halves as well.

To ensure proper alignment of the bulkheads and other related parts (which allow correct dihedral of the wings) during steps 6 & 7, I sandwiched everything into the fuselage halves with a clamp, and allowed the glue to fully cure before removing that sub-assembly.

There are two small windows provided in the kit on the fuselage sides by the bomb bay. On aircraft that were in service as bombers, these were actually hinged hatches, not windows at all. The kit instructions make no note of the fact that these windows need to be painted over to represent any of the given options. There were windows in these locations used in cases of aircraft used as troop carriers, like the example in the RAF museum in Hendon, so it's important to note which aircraft is being modelled and the window configuration sorted accordingly.

The detailed bomb bay was built empty, and although I was going to close the bay doors, I couldn't be sure how much of it was to be seen on the finished model through the cockpit entrance or the dorsal gun position, so it had to be painted and installed. ➤



## ◀ COCKPIT DETAIL

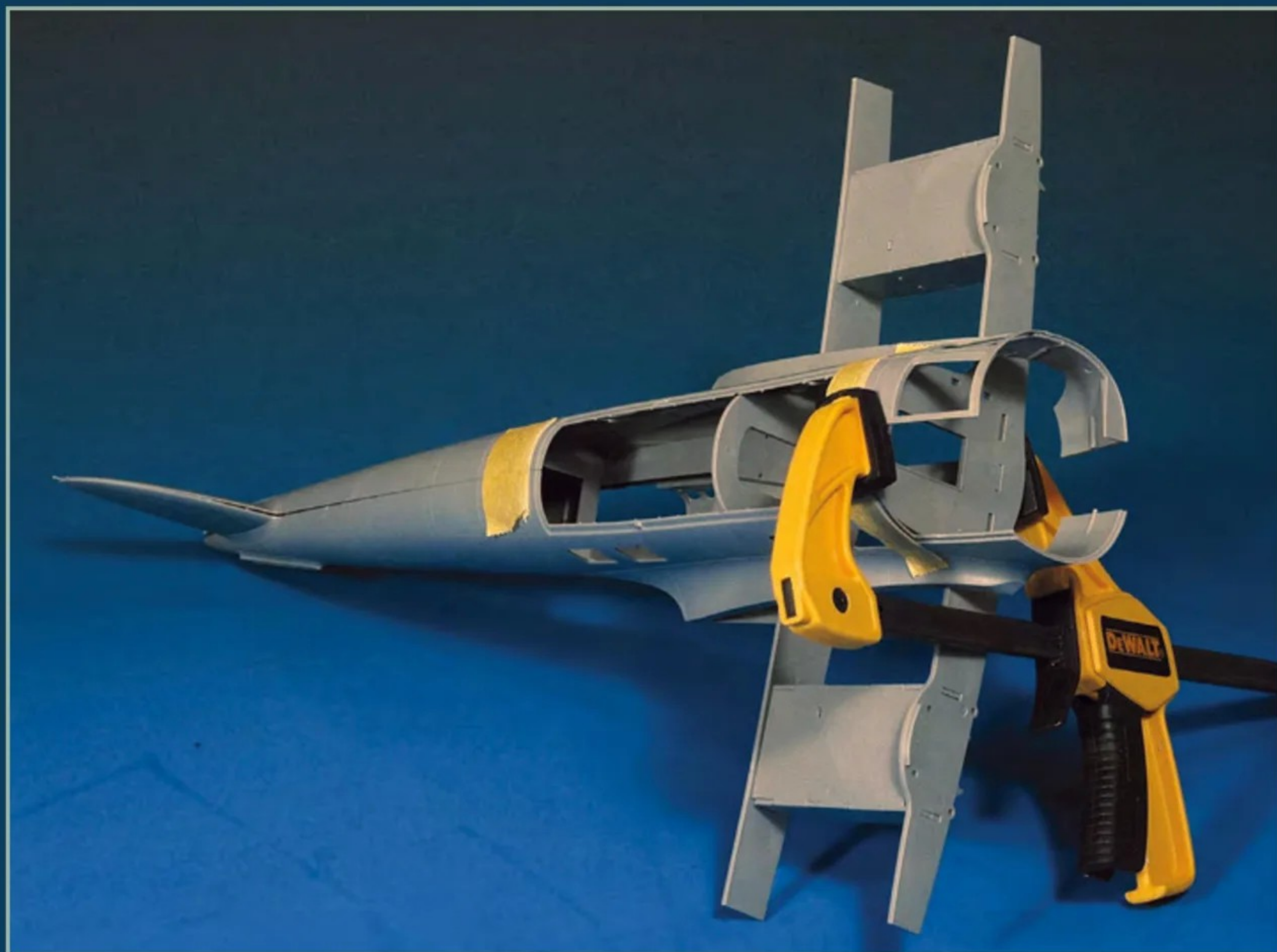
With the Eduard cockpit detail set to add, many of the etched parts are coloured. The overall interior colour was called out to be RLM02, and the Tamiya acrylic in the instruction sheet stated XF-22. Many of the etched parts had a light green colour to them, which I repainted in a dark grey, since references indicated that the instrument panel, for example, was that colour and not RLM02.

I added as much of the brass-coloured etched metal detail as I could before painting all surfaces black as a pre-shade, and then airbrushing over this the XF-22 interior colour. The bomb sight was built with styrene posts for the vision tubes, and painted in a light grey before weathering with oil paints.

The seat belt set from HGW were assembled for the pilot and navigators seats, and also added to the dorsal gunner's position. The fabric straps with etched metal buckles are tricky to put together, and if the super glue used to fix them found flooded out onto the surface, it became difficult to add the coloured oil paint wash used to colour it. Based on references from the He 111 on display in Gardemoen, Norway I added a seat to the dorsal gunner's frame using lead strip.

The control column received a small amount of etched detail and I also added a wiring harness with thin lead wire. An oxygen hose, clamped to the side of the column, was added using thicker lead wire.

Since most of the machine guns had to be added before buttoning up the fuselage halves (and installing the front glazed nose) I had to plan on how to manage the barrels, which all had sights added. I separated the barrels from the guns, and drilled holes in each end to insert a small piece of copper wire to join the parts at the end of the build. Eduard showed the ring sight in the reverse position to how it should have been with the rear sight which

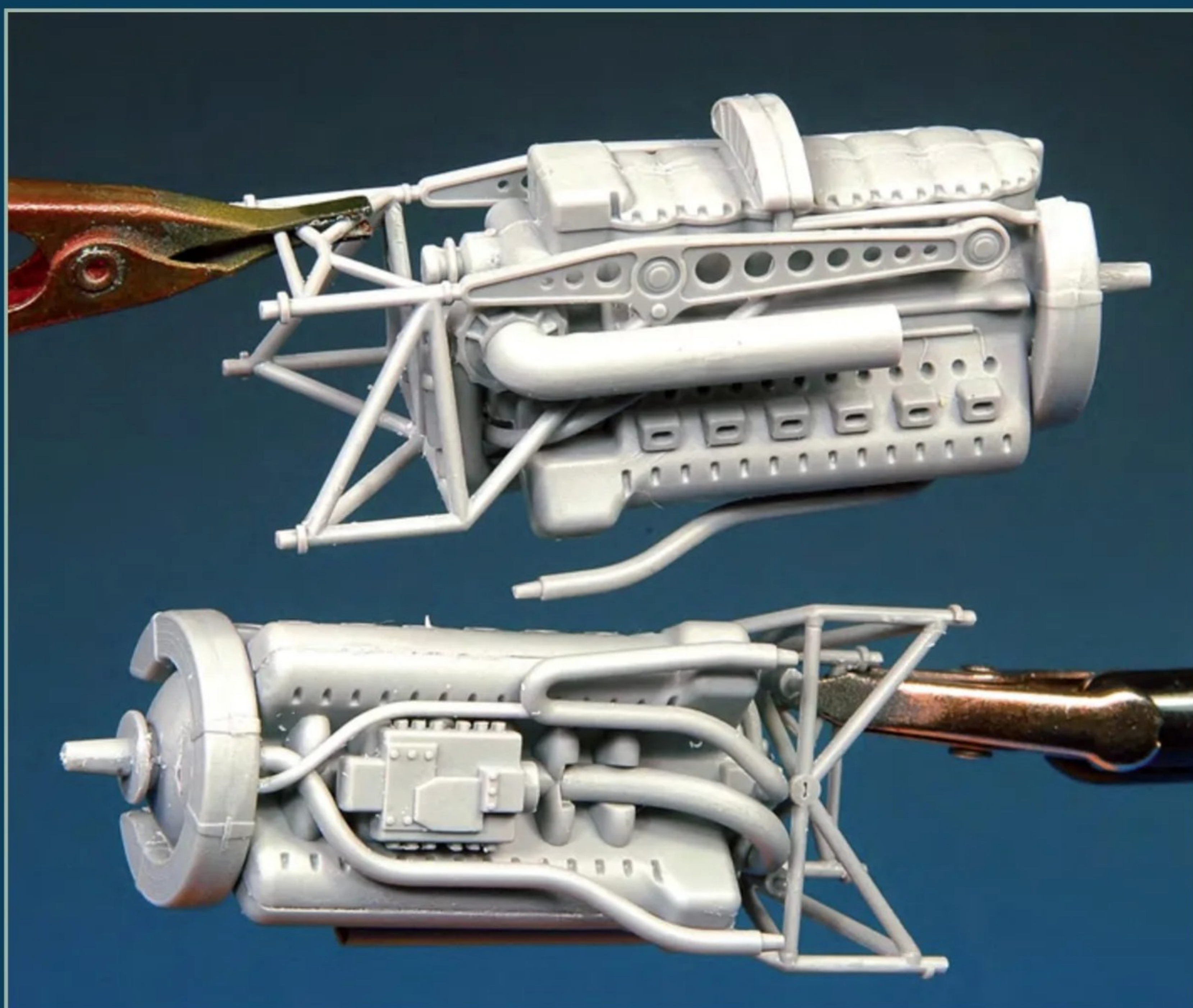


Interior bulkheads and floor were aligned by clamping them within the fuselage halves while the glue set.

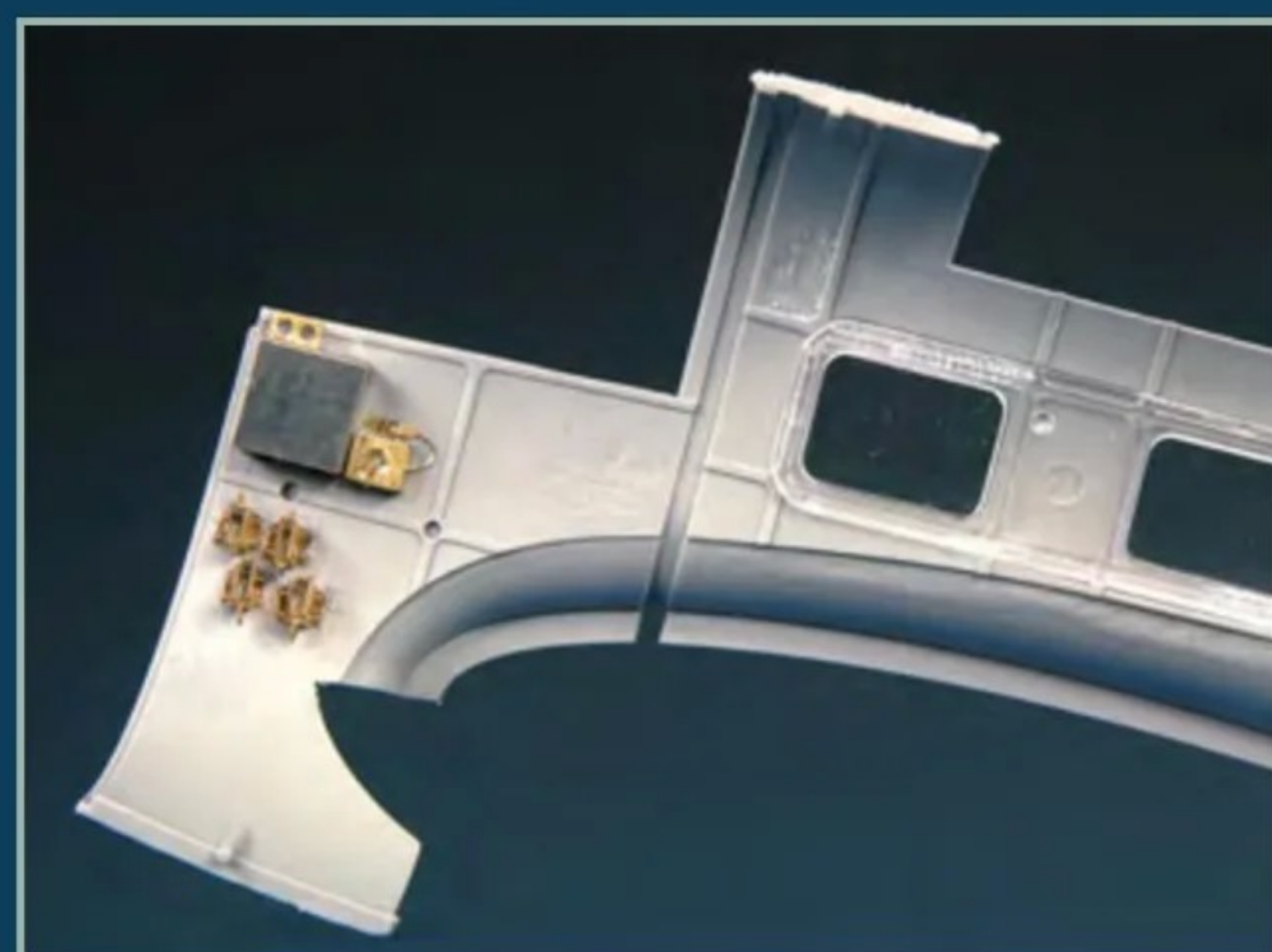
***"TWO BEAUTIFULLY DETAILED ENGINES WITH MOUNTS ARE INCLUDED WITH THE KIT. FOR ANYONE WANTING TO OPEN THE COWLINGS, THESE ARE IDEAL..."***

I blindly followed until realizing the error, and had to rebuild them. The rear sections of the guns were painted, and then cemented firmly into their holes in the glazed parts before these were subsequently glued into the fuselage.

The cockpit detail and rest of the interior of the fuselage was weathered with oil paint washes and a few small paint chips applied with dark grey Vallejo acrylics. Gluing together the fuselage halves was done in stages,



The kit's engines are little jewels of detail, but were just supports for the propellers since mine would be buttoned up.



Much of the etched detail was added before painting the fuselage interior. The windows in the bomb bay area were painted over since they were actually metal hatch doors.



Although little of the bomb racks could be seen on the finished model, they were added since one could never be sure just how much could be seen from the open dorsal gun position or through the cockpit windows.



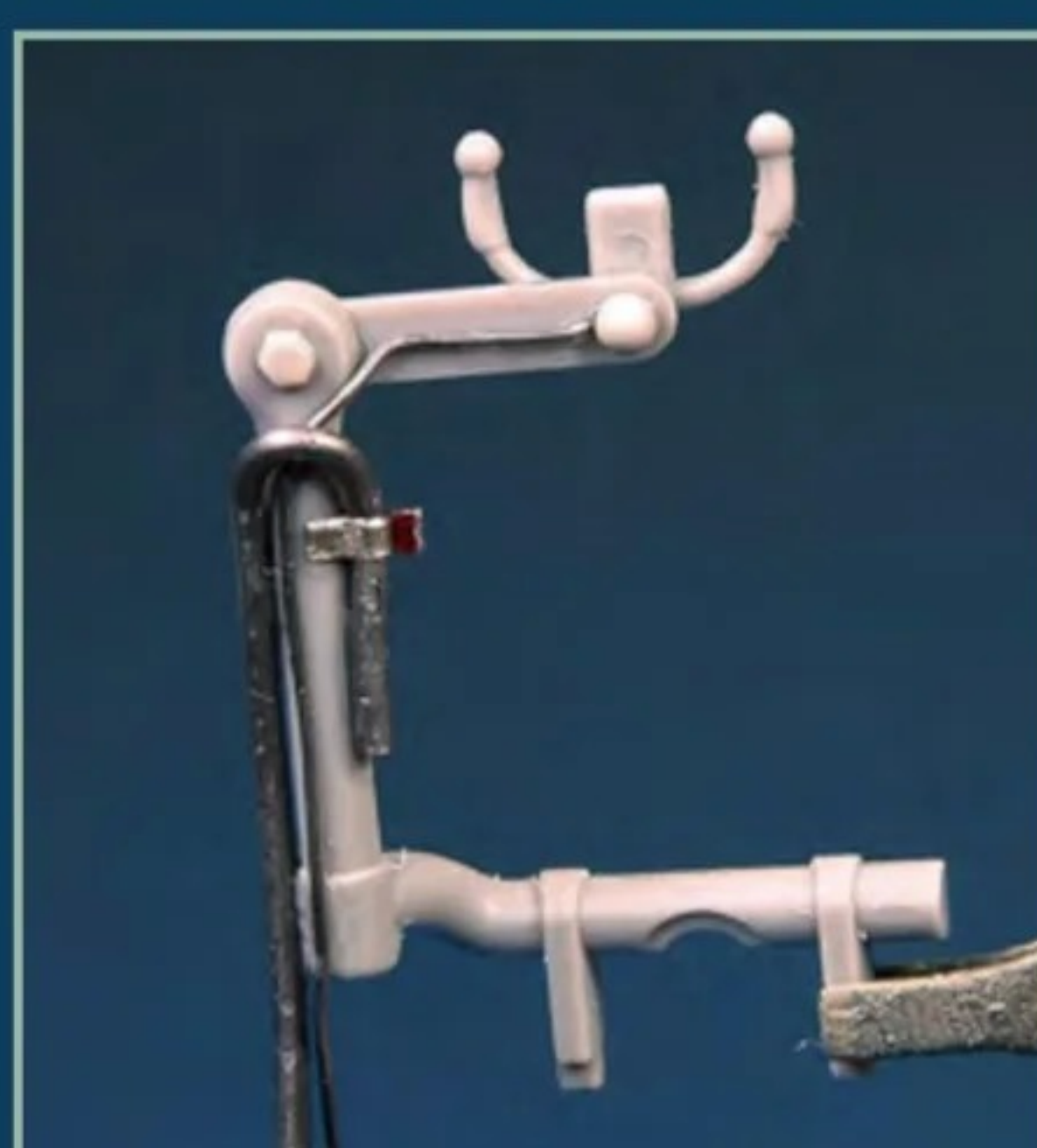
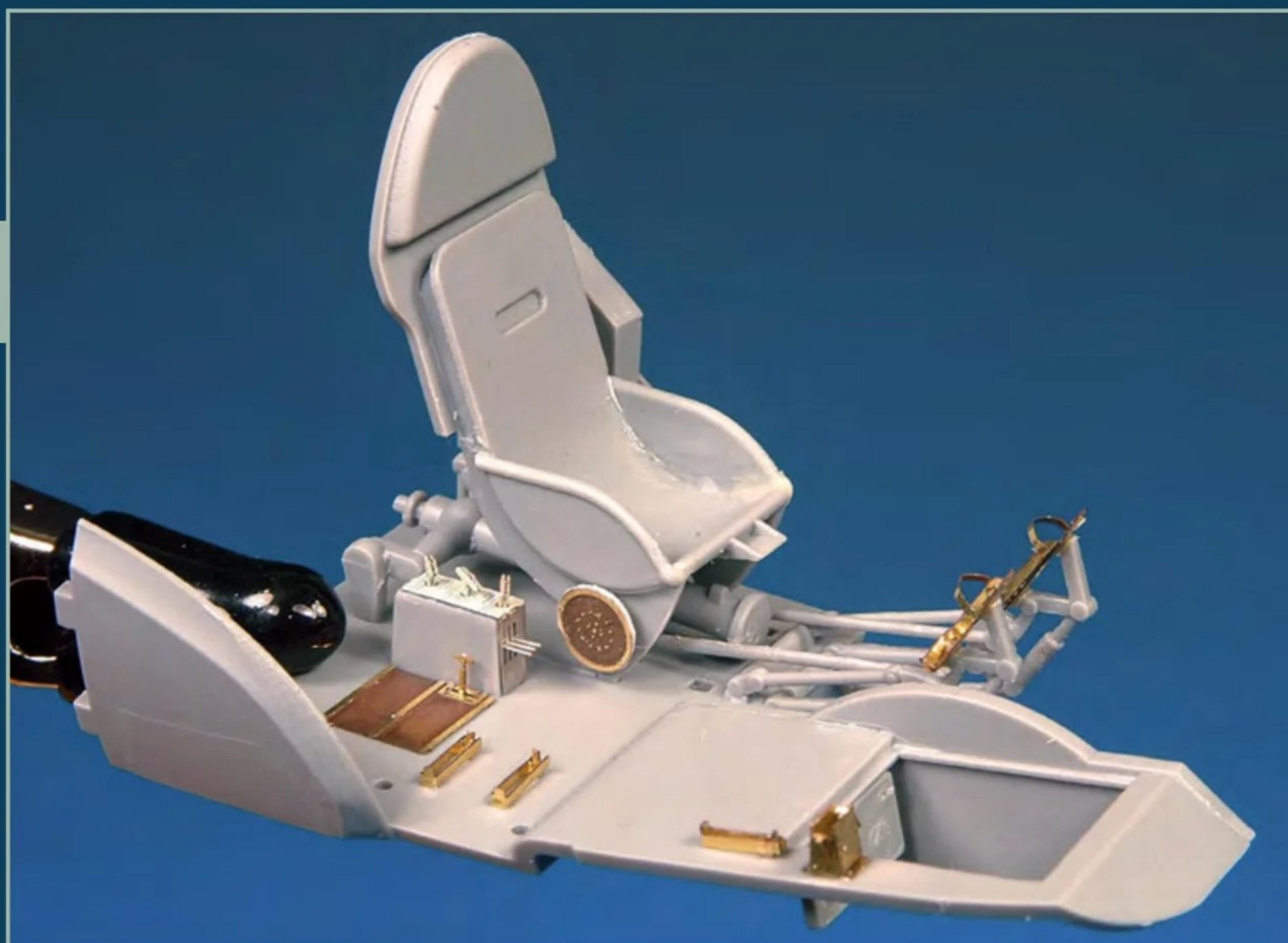
Detail for the cockpit included foot pedals and various controls for the pilot.

ensuring minimal gaps. The upper fuselage panel had a few gaps after I'd used a touch of Flex-I-File Plast-I-Weld glue to get a solid joint. This cement is quite fast acting, and since I'd put some tension on the parts to hold them together it helped form a decent joint that wouldn't easily pull apart as the glue set.

Two beautifully detailed engines with mounts are included with the kit. For anyone wanting to open the cowlings, these are ideal. But mine were built only to support the propellers, so after construction they were painted flat black and mounted into position.

For gap-filling along the wing and horizontal stabilizer joints I used stretched sprue. These joints were quite thin, and the sections of styrene pulled from the sprue worked well after being placed in position and soaked down with a small touch of the extra thin cement. The joints for the upper fuselage and engine nacelles needed putty, which I used Magic Sculpt and Tamiya's lacquer based grey putty.

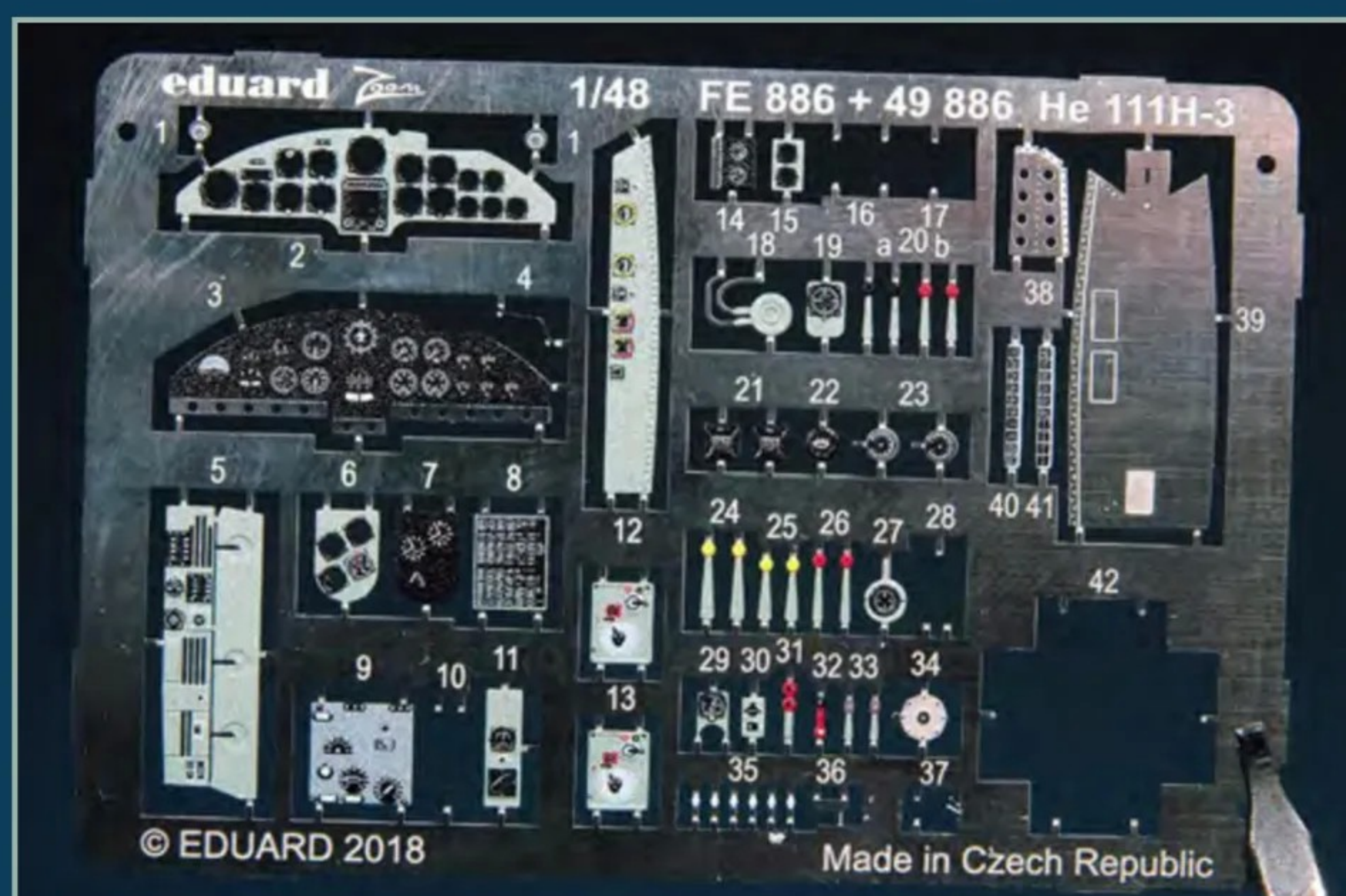
To give the wing roots a bit more stability I added a small 40 thou styrene support inside the widest location before gluing on the upper wing sections. The plastic was warped on the leading edge of the right wing where it met the engine area. I had to physically bend it into a better position (trying not to crack it) and use the Plastic-Weld glue here to help the edges mate up properly. ➤



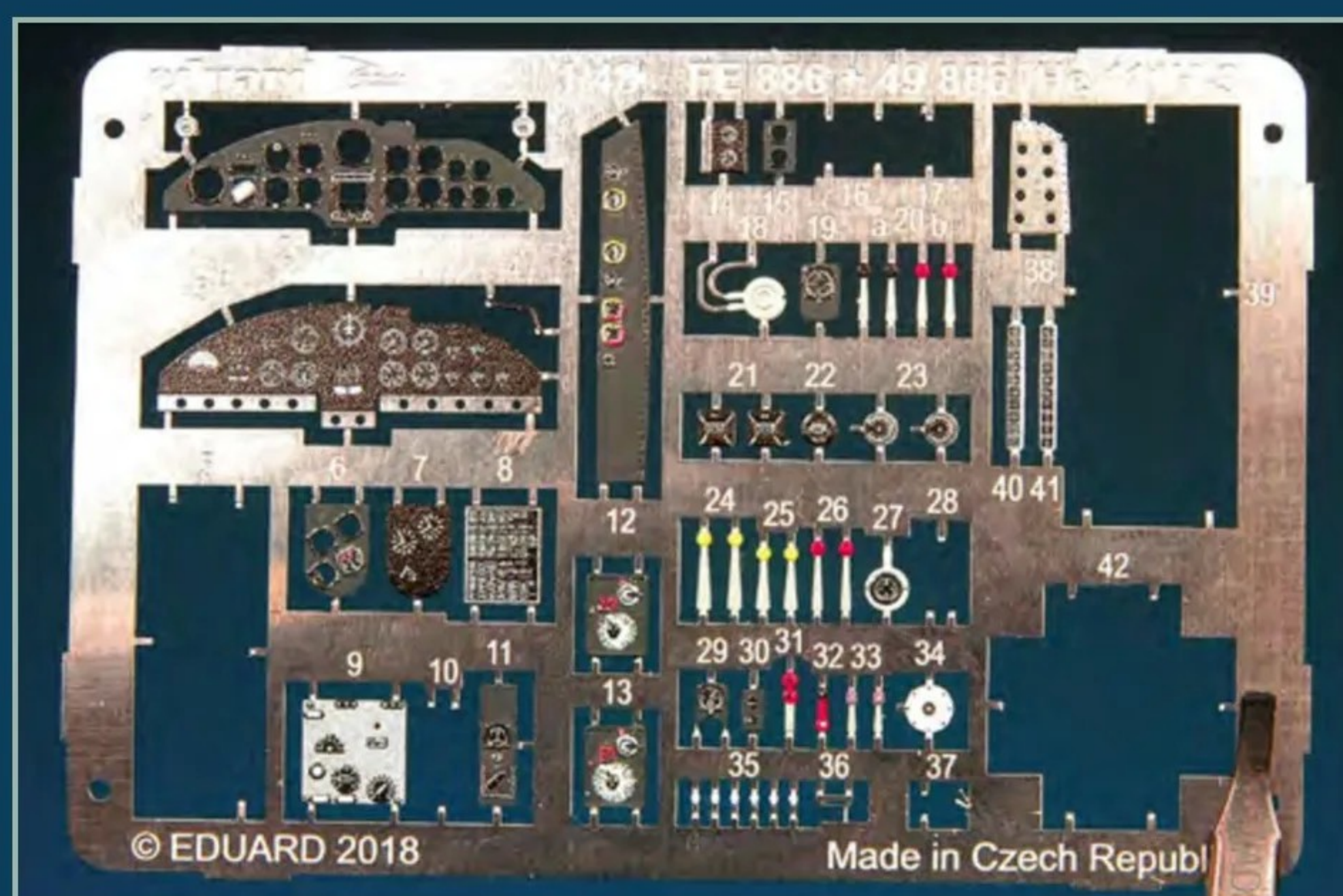
Lead wire was used to make a wiring conduit and oxygen hose mounted to the control column.



The instructions for Eduard's etched gun sights had their positions mixed up - which I later corrected.



The fret of Eduard's etched metal set had an odd light-green colour for many of the components.



I painted the instrument panels and some of the other parts in a more appropriate dark grey using Vallejo acrylics.



The dorsal gunner's seat was detailed with lead foil and wire to match references from a museum example in Norway.



After painting, the seat was detailed by adding a harness from HGW.



The painted and detailed navigator's seat.

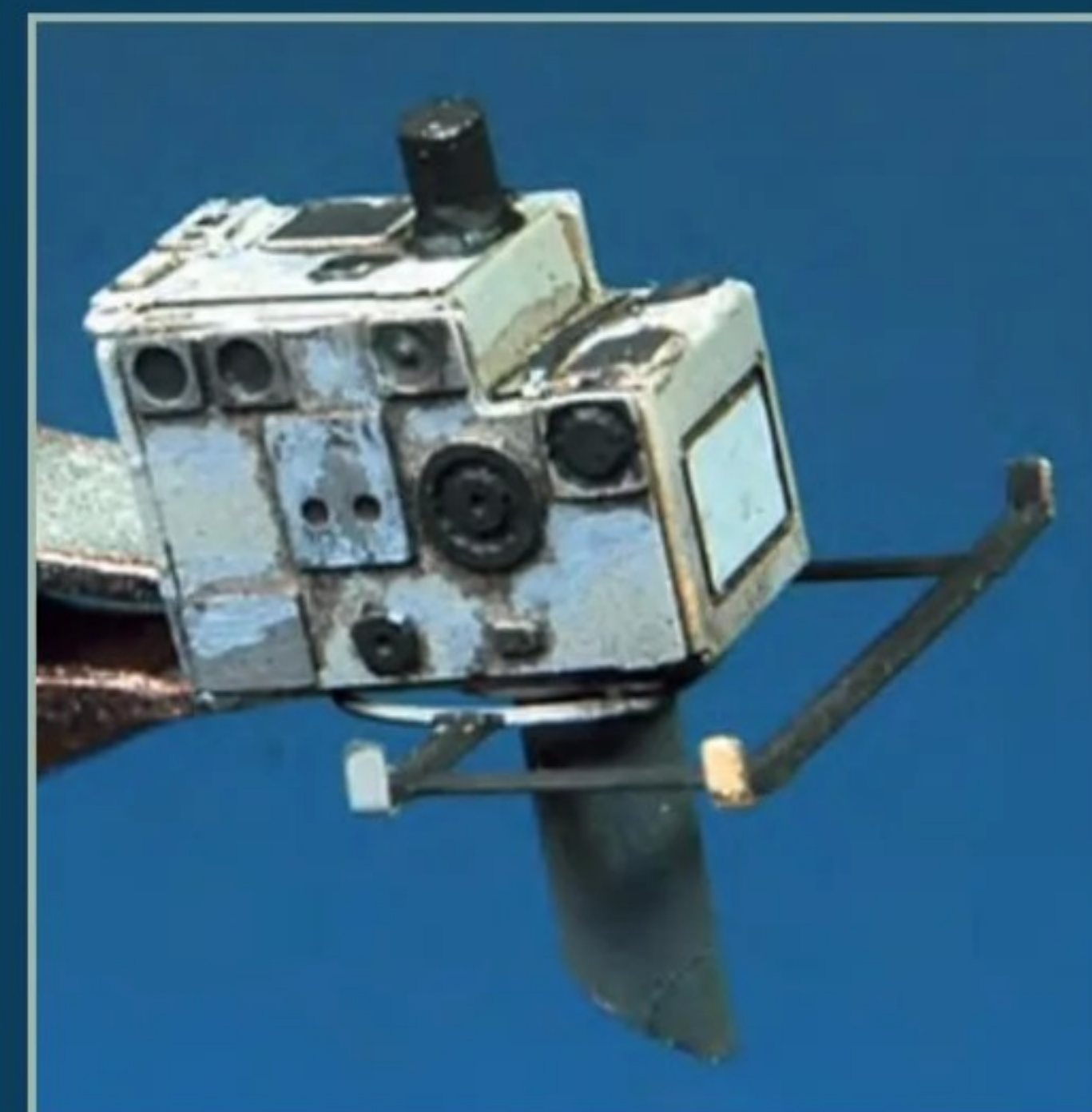




Pilot's control column after painting and weathering.



Paint chips were applied around the cockpit area using dark grey Vallejo acrylics.



The Eduard bomb sight was detailed with styrene rod, painted light grey, and weathered with oil paints.

The interior of the fuselage was painted using Tamiya's XF-22 over a black pre-shade. Clamps were used to ensure a positive fit of the subassemblies into the fuselage halves.

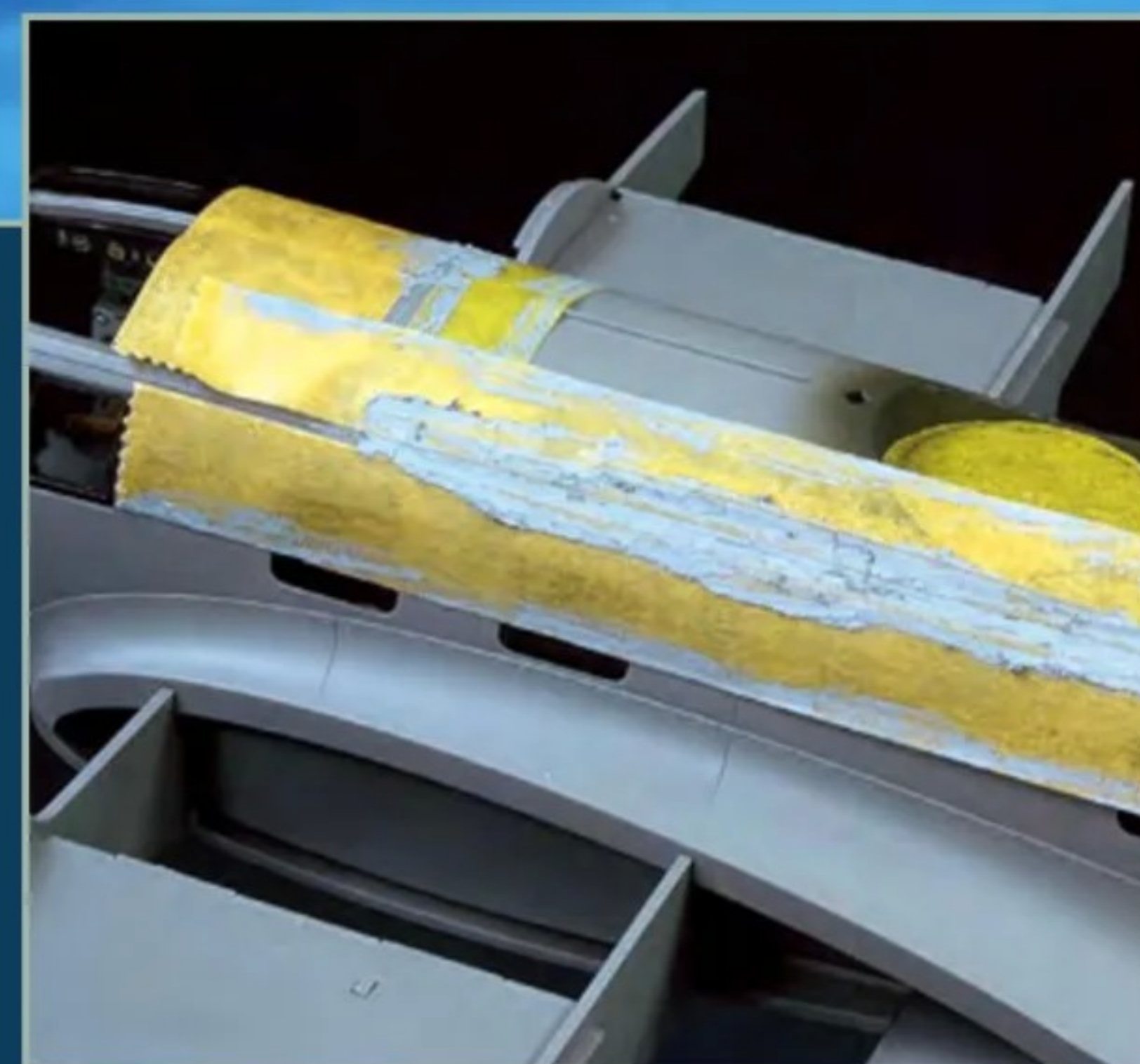


## ◀ CLEAR PARTS

I have always dipped my clear parts in a clear acrylic solution typically referred to as Future, which is in my case Johnson's Pledge. It seems to give the parts a nice lustre and also helps protect them from fogging in the presence of super or styrene glue. Once dipped, the excess liquid is soaked off and they are suspended with a "helping hands" tool to dry for a day or so. After drying off, I glued in my glass parts to the fuselage halves along with the rear parts of the guns.

The front glass housing parts were aligned on a flat porcelain tile and cemented together

in the shape of a cone with a touch of Tamiya's Extra Thin Cement. This assembly was subsequently cemented to the front of the cockpit after all the painted & weathered detail had been added. That was the plan. I had forgotten to add the bomb sight which couldn't be placed without carefully removing the glass subassembly that I'd just painstakingly installed. At least when I later had to add the pilot's engine control panel (which I again forgot!) to the left of the seat I was able to do that with a pair of tweezers through the small opening before adding the frontal dome. And I call myself a modeller, now ashamedly.



To minimize the amount of Tamiya putty used to fill any gaps, borders of tape were used near the seams.



This particular aircraft carried an additional gun in the nose, shown here with a sling support made from soft metal strip.



Cockpit detail before adding the glazing to the nose. The forgotten pilot's engine control panel was added later using tweezers through the small hole before the glass dome was cemented into place.



## PAINTING AND FINISHING

Eduard's canopy masks saved me quite a bit of work, and even applying those took a fair bit of time. They suggest filling the curved middle sections with liquid mask after completing the perimeter of those contoured parts like the front dome and upper dorsal glazing, but I preferred to just make it up with small sections of regular Tamiya masking tape, not knowing what effect the liquid mask would have on the acrylic finish on the clear parts. With the masking applied, I airbrushed the interior colour of XF-22 over the glazed areas of the lower gondola and nose.

To create a subtle weathered effect, I pre-shaded the panel lines by airbrushing XF-1 Flat Black over all the surface of the model. For the underside light blue, I mixed XF-23 Light Blue and XF-2 Flat White in a 1:1 ratio to create RLM 65. This was lightly airbrushed over the pre-shade panel lines in a couple of sessions, bringing the colour in gradually to tone down the darkness and just allow a subtle effect showing through. After all was dried I protected the finish with a few light applications of the Future floor acrylic.



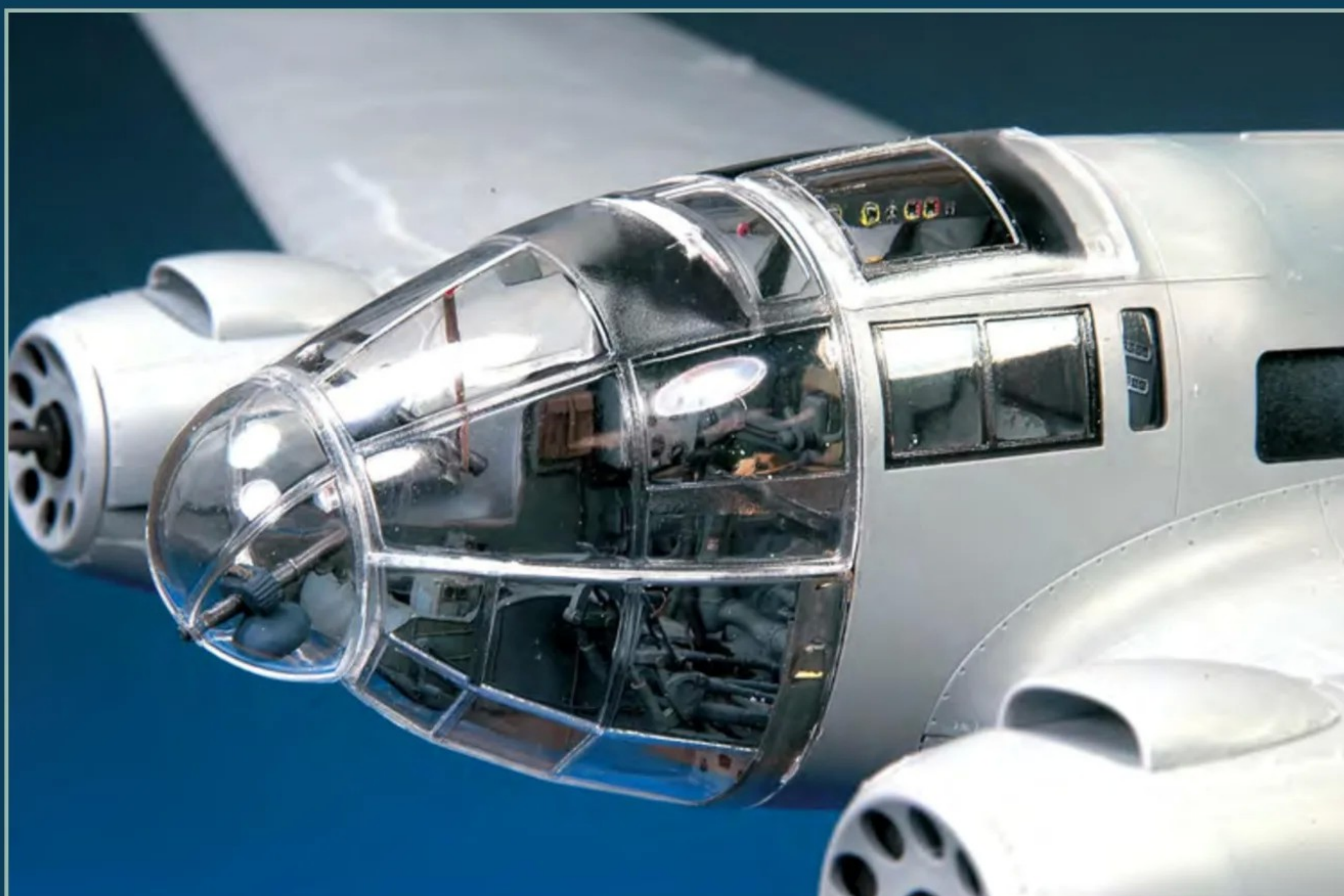
To help align the contour of the wing root and give additional support, small sections of 40 thou plastic were cemented into place.

Before masking the demarcation lines of the underside, I studied typical examples of how these aircraft had been painted in period photos, and saw the wide variety of options, not to mention what the kit instructions suggested (of which all of their choices were identical). Choosing my pattern, I went through a fair bit of tape to mask off the edges of the underside. It was noteworthy to see the topside colour wrap around the leading edges of the wings more so than I'd imagined.

The upper camouflage scheme was the standard RLM 70/71 application, and I had a fairly good reference for the pattern from Ian ➔



Engines were just airbrushed black and the cowlings glued into place. The leading edge of the right wing was warped, and had to be physically bent into place to mate up near the engine nacelle.



The busy cockpit shown buttoned up and ready for masking. Carefully applied Tamiya Extra Thin Cement was used to glue the glazings that had first been protected in Future floor acrylic.



LEVEL 4



03796 Eurofighter Typhoon - RAF, 1:144

LEVEL 5



03802 F-16 Falcon 50th Anniversary, 1:32

LEVEL 4



03816 Airbus A330-300 "Lufthansa" New Livery, 1:144

LEVEL 4



03790 Arado AR E.555 (P-Series), 1:72

LEVEL 4



03804 Alouette II, 1:32

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**hobbycraft**

[hobbycraft.co.uk/brand/revell](http://hobbycraft.co.uk/brand/revell)



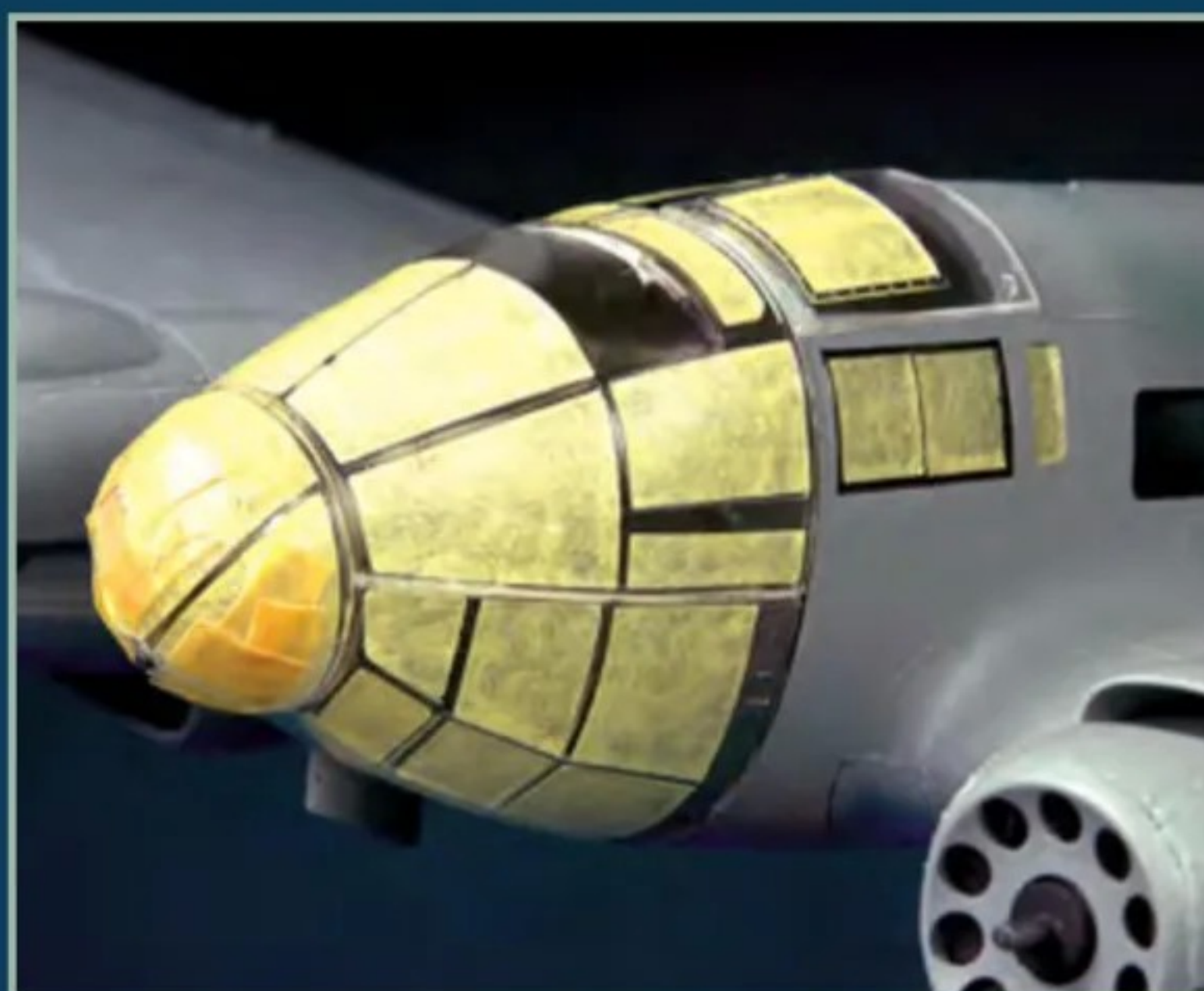
Robertson's build in the publication of Classic Modelling Guides "The Luftwaffe in The Battle of Britain 1940". Not that the instruction guide was bad, but just missing some detail behind the side view due to the wings hiding it. RLM 70 was straight XF-27, and for the RLM 71 I mixed XF-49 with XF-62 in a 1:1 ratio.

RLM 71 was first applied similarly to the light blue underside, slowly building up colour over the dark panel lines. I covered an area larger than needed, since this was to be masked off afterward and needed to slightly overlap the demarcation of the pattern. After protecting this paintwork with Future, it was time to mask off the splinter pattern of the camo scheme. The exercise of masking the upper splinter pattern was an arduous task, and I spent several hours trying to get all the lines of tape to match the complex shapes. Instead of taping off the larger areas entirely, I held post-it note paper in place whilst airbrushing on the RLM 70. Even after completing the scheme and protecting it with clear finish, I still repainted certain areas I was displeased with around the engine cowlings and tail section.

A panel line wash of dark brown/black oil paint was added to the entire model to enhance this detail. I mixed mineral spirits with a touch of black and raw umber Winsor & Newton oil paint, varying the tone and intensity for different areas. After this had dried for about an hour, I rubbed off any excess with either a cloth, brush, or my thumb to eliminate tide marks and blend out any messy areas.

## DECALS

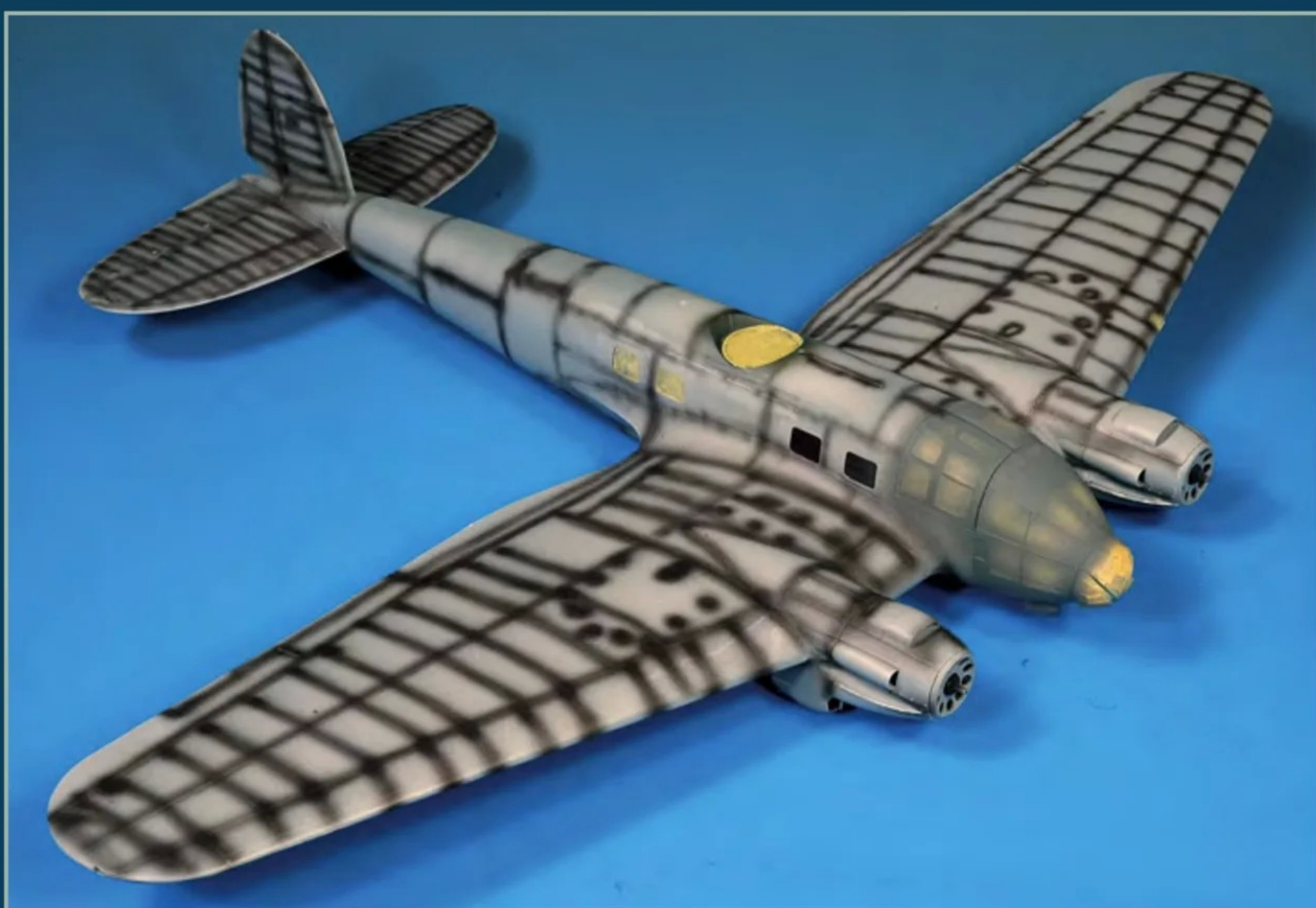
I had intended originally to build an aircraft from 9./KG53 with code A1+BT and pink formation markings on the right wing and tail. I had purchased the Xtradecal sheet X48-087 many years ago anticipating such a build. Due to poor



Eduard's masking set for this kit saved a lot of time and effort. Small bits of tape were used for the curved areas as opposed to the suggested liquid mask.



The interior colour of XF-22 was airbrushed first onto the glass frames of the nose and gondola.



A pre-shade of black was applied to all of the panel lines of the model.

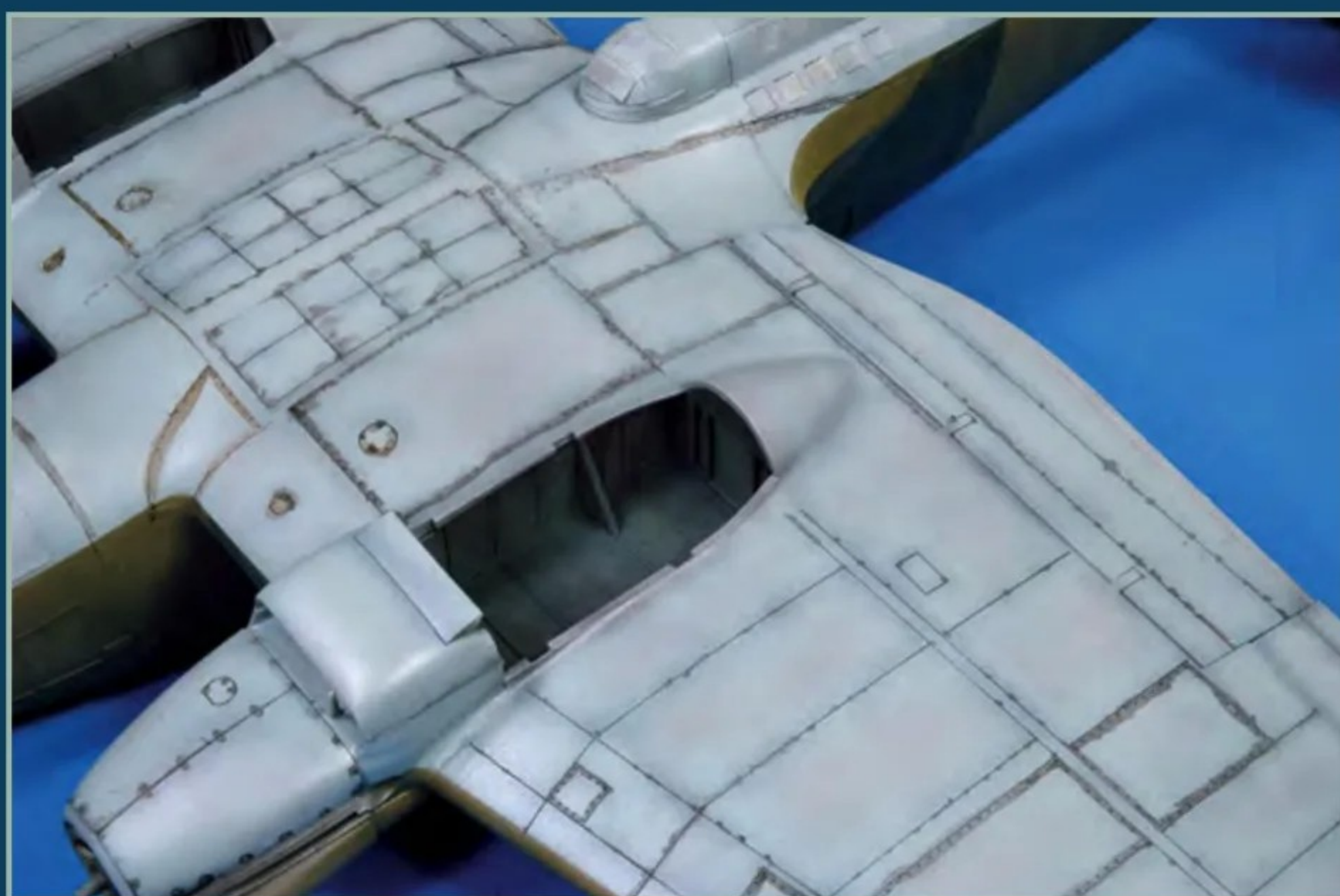


A mix of XF-23 and XF-2 for RLM 65 was airbrushed onto the lower surfaces, gradually toning down the harsh pre-shade.

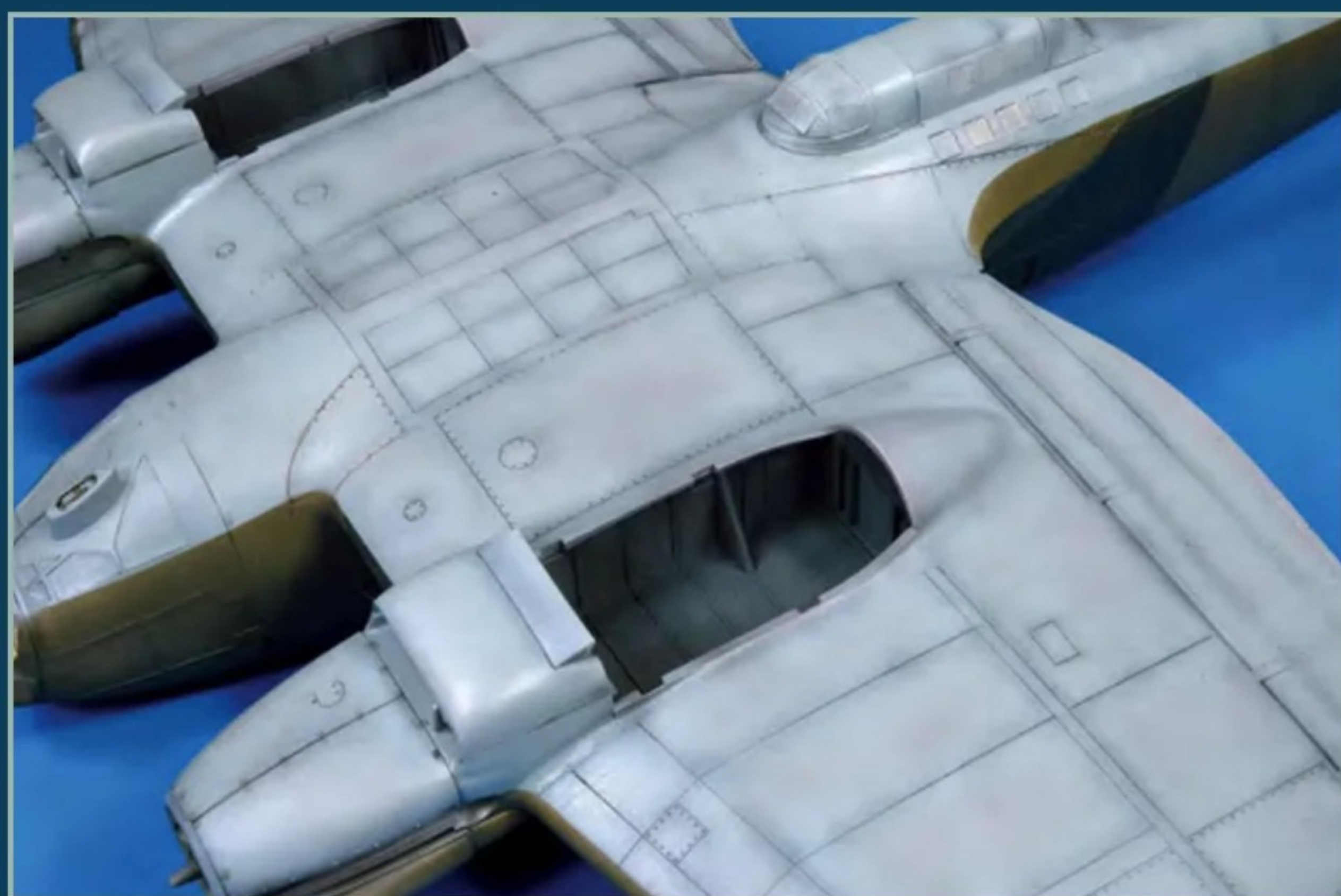


The process of masking the splinter pattern of RLM 70/71 involved many taped-off lines, along with use of post-it notes for the larger areas.





A panel line wash using raw umber and black oil paint diluted in mineral spirits was applied and left to dry for an hour or so.



By wiping off the surface with a cloth or brush very slightly dampened with mineral spirits, the lines were cleaned up and any tide marks blended out.



The upper camo scheme after the application of the panel line wash, and a protective coat of Future floor acrylic.

planning, I had failed to notice that particular aircraft was a He.111H-2, and differed from my build most notably with the MG configuration. Since I'd literally painted myself into a corner, I chose to use the markings of option 3 in the kit, but not apply the white formation bars to the wings and tail. These markings seemed like guess work by ICM regarding possible placement and even the colour. My model would be finished to appear as it did before any such markings were applied.

With all surfaces painted, I applied some extra gloss to the areas about to receive decal application with more Future acrylic. Starting with the large lower wing crosses, I heated up some water in a pot and got to work, immediately destroying my very first decal when it cracked during application. Believing this to be a result of too little soak-time and not enough water on the model's surface to allow time to position it, my second try went a lot smoother. Happily, the Xtradecal sheet provided the spare I needed for the one I'd just ruined.

The tiny stencil decals provided by ICM didn't hold together well at all, and 90% of them separated into pieces as I did my best to get most of the film into position on the model. Some of the ones on the underside I didn't bother to add at all. ➤



The tires were painted in XF-69 NATO Black, then the outer walls airbrushed with a subtle line of greyish dirt colour.

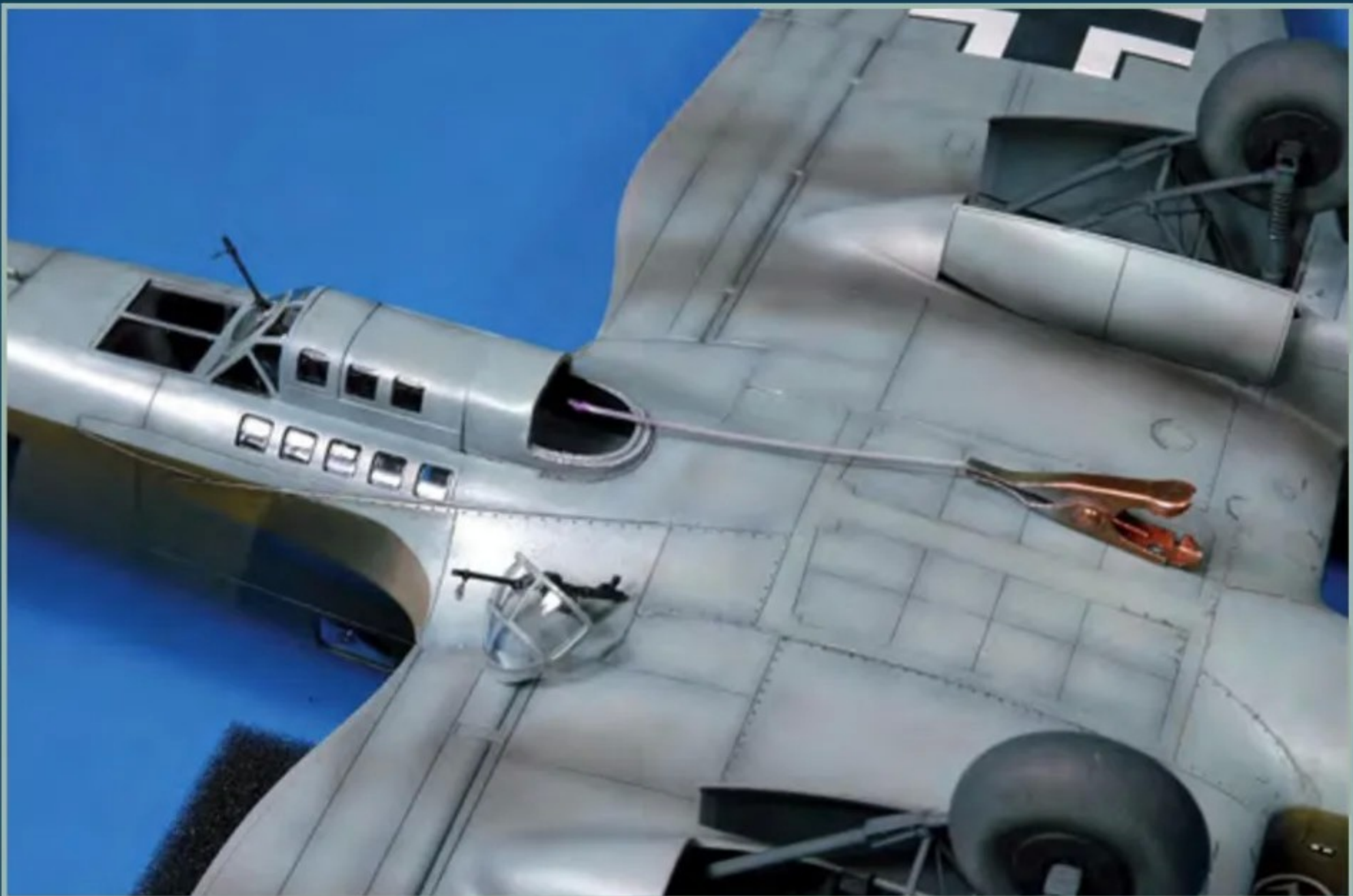


After applying the markings, they were given a very dilute overspray of the background colour to mute their stark appearance.





The dorsal gunner's position had the rotating gears dry-brushed with a toned down silver enamel to enhance the detail. The glossy brown part just forward of that is an antenna.



During emergency surgery to fix the front gondola MG, I was able to retrieve a shaving of errant plastic from the opposite window using an improvised tool of styrene rod with a dab of sticky liquid mask on the end.

Using a cautious approach, I succeeded in applying the upper markings with well-soaked decals onto a generously wetted surface, and a minimal amount of positioning. Any silvering was eliminated by poking the decal with a sharp hobby blade and applying a touch of Tamiya's X-20A acrylic thinner. Since there are no kit-provided swastikas for the tail, I used the ones on the Extradecal sheet.

In between the several sessions used to apply all of the decals, I gave a sealing spray of Future for protection. To tone down the bright appearance of the markings, I over-sprayed them using a very dilute mix of the surrounding colour. This provided a very subtle weathered look overall, and made the model look less toy-like.

The paint scheme was tweaked by adding patches of RLM 71 where desired, when research materials were in contradiction.



I chose not to add the formation marking white stripes to the wings and tail, preferring the look of the aircraft to be before that was done.





## ADDITIONAL WEATHERING

By adding a few touch-ups here and there with a lightened tone of the original colours, it added to a more mottled appearance to the model's surface. The flat paint also appeared slightly lighter than the glossed application, adding to the effect. A diluted dark mix of X19 Smoke, XF-1 Black, and XF-68 NATO Brown was sprayed aft of the engine exhausts, fanning out towards the rear underneath the wings.

ModelMaster Chrome enamel was mixed with a touch of black and raw umber oil paint, and using a very fine tipped Tamiya 87048 brush applied to the model in the form of paint chips. These small scratches to the paintwork were applied to areas where service work would have been carried out - access panels, engine cowlings, and also where the propellers would have blown back runway debris etc. Any of this paint chipping that appeared too bright was over-sprayed with the background colour to dull it down.

Dark oil paint was diluted and added to surfaces streaked back from the engine compartment to replicate oil stains. Life Color Tensocrom TSC 207 Oil acrylic paint was applied in a random pattern to the tops of the tires to represent a typical example of where oil spills occurred. Period photos show many aircraft tires being tarped off to prevent this.

## SMALL DETAILS

A fair bit of detail was left off the model to prevent damage while handling during the previous steps. The delicate undercarriage assemblies were constructed around the wheels after painting the tires XF-69 NATO Black, and airbrushing the outer surface just on the sides with a "greyish dirt" mix of Tamiya acrylics.

The engine exhausts were airbrushed flat black, and then rubbed with orange, brown and earth coloured chalk pastel dust. They were then drybrushed with a mix of Chrome enamel, toned down with dark oil paint to create a random patina.

The MG barrels were glued into place using the wire filament as previously described, save for the front gondola position. The small hole which I needed for the barrel to fit into had been filled with a mix of glue and styrene, and had to be re-drilled. Unfortunately too ➤



Paint chips were added using a fine tipped brush, and ModelMaster silver enamel toned down with dark oil paint. Decals were added with the help of a touch of Tamiya's X-20A thinner to help adherence and eliminate silvering.



Any paint chips that appeared too bright were over-sprayed with the surrounding background colour. MG barrels were detailed with sights from both Eduard and Master.

Engine exhaust pipes were weathered with pastel chalk dust and metallic drybrushing.







A diluted mix of Smoke, black and brown acrylic was airbrushed on the lower wings and gear doors to emulate exhaust stains. EZ-Line thread was fastened between the supports for the radio antenna.

← much pressure separated the gun from the glazing, pushing the loose part into the sealed fuselage. To fix this issue, I had to remove the front clear part, and shake the loose gun out of the fuselage as it rattled from place to place and refused to escape. With time and patience I was able to retrieve the rear part of the MG and attach the barrel to the other side of the glazing, and then replace the assembly with little damage to be seen. The upside of this exercise was that I had the opportunity to retrieve a small plastic shaving stuck to the glass of the opposite window. Using a long strand of styrene with a dried blob of liquid mask on the end, it was sticky enough to pull out the offending shard nicely.

I had broken off the antenna mount on the tail at the very beginning of the build, and so glued in a piece of small brass tubing to replace it. A length of EZ-Line stretchy thread was glued in place for the antenna wire, and two small blobs of PVA glue were placed near the ends to represent the insulators (or whatever the devices are that appear in the photos).

## FIGURES

The figures used in the display of the model were painted up a year or so ago for use in a similar build when I constructed ICM's Dornier 17Z (MIA issue 135 December 2022). I used Vallejo acrylics for the job, and a microscope to help with the details at that scale.

## CONCLUSION

Measuring out at a wingspan of 47cm and length of 35cm it is actually the largest model in my collection, and therefore a tricky one to display and transport, but the end of this rather challenging build I was left with a very accurate looking example of something that had been sitting on my shelf just aching to be built. After admiring the many 1:48 scale Heinkel He 111 models at various shows over the years, I finally had my own to proudly enjoy. •

## MODELSPEC

ICM 1:48 scale He 111 H-3. Kit No. 48261

ICM 1:48 scale German Luftwaffe Ground Personnel (1939-1945) Kit No. 48085

ICM 1:48 scale German Luftwaffe Pilots and Ground Personnel (1939-1945) Kit No. 48082

### Accessories used:

- Eduard canopy masks EX580
- Eduard He 111H-3 nose interior etched metal detail set 49 886
- HGW seatbelts (adapted from Ju.88 set) 148546
- Master 1:48 MG 15 barrels & etched sights AM-48-055 (parts from)
- Xtradecal sheet X48-087

### Tools and Materials Used:

- Tamiya Extra Fine Cement
- Tamiya Basic Putty
- Mercury Adhesives Super Glue Thin & Medium types
- Harder & Steenbeck Infinity CRplus Airbrush
- Walter Products 3.5x - 90x Trinocular Stereo Microscope with a 144LED ring light WP-1AFZ-IFR07-5N
- 10mm Tamiya Masking Tape
- Lead wire 0.01" and 0.02"
- Micro drill set

### Paints and Finishing Products Used:

- Tamiya Acrylic paints as listed in the paint callouts.
- Winsor & Newton Oil Paint Series 1 554 Raw Umber, 744 Yellow Ochre, Ivory Black, 074 Burnt Sienna
- Vallejo Acrylic paints as listed in the paint callouts
- Alclad II lacquer paints as listed in paint callouts
- Model Master enamel Chrome Silver
- Mineral Spirit thinner
- Rembrandt Artists Chalk Pastels various colours.

### References:

- The Luftwaffe At War 1939-45 by Adolf Galland, K. Ries, R. Ahnert Ian Allan Publishing
- Luftwaffe Camouflage & Markings 1935-45 Vol.2 by J.R. Smith & J.D. Gallaspy. Kookaburra Technical Publications Pty Ltd.
- The Luftwaffe in The Battle of Britain 1940 by Brett Green, Ian Robertson and Jamie Hagg. Classic Modelling Guides
- Various images from Internet sources.







ICM's Luftwaffe troops were painted with Vallejo acrylics. Raw umber and black oil paint were diluted with mineral spirits and dappled behind the engine areas to mimic oil stains. Engine oil spills on the tops of the tires were painted on using Lifecolor Tensocrom Oil TSC207. The tail marking was not provided in the kit, and was taken from Xtradecal sheet X48 087







## KIT PREVIEW

# THE LAST BIPLANE

The Editor takes a close look at the Airfix 1:72 scale Gladiator - the RAF's last biplane fighter aircraft.

**T**he Gloster Gladiator (or Gloster SS.37) was a British-built biplane fighter.

It was used by the Royal Air Force (RAF), the Fleet Air Arm (FAA) as the Sea Gladiator variant, and was exported to a number of other air forces during the late 1930s.

It was the RAF's last biplane fighter aircraft and was rendered obsolete by newer monoplane designs even as it was being introduced. Though often pitted against more formidable foes during the early days of the Second World War, it acquitted itself reasonably well in combat.

The Gladiator saw action in almost all theatres during the Second World War, with a large number of air forces, some of them on the Axis side.

The RAF used it in France, Norway, Greece, the defence of Malta, the Middle East,

and the brief Anglo-Iraqi War (during which the Royal Iraqi Air Force was similarly equipped).

Other countries deploying the Gladiator included China against Japan, beginning in 1938; Finland (along with Swedish volunteers) against the Soviet Union in the Winter War and the Continuation War; Sweden as a neutral non-combatant (although Swedish volunteers fought for Finland against USSR as stated above); and Norway, Belgium, and Greece resisting Axis invasion of their respective lands.

The South African pilot Marmaduke "Pat" Pattle was the top Gladiator ace with 15 victories with the type\*.

Airfix released their brand new 1/72 scale Gloster Gladiator Mk.I/II in 2013 and is still widely available in several boxings today.

The kit comprises 59 parts in light bluish-

grey plastic and five parts in clear. The model is packed in a cardboard box with a separate lid – a small detail perhaps but more robust than end-opening boxes.

The light bluish-grey plastic is softer than the material used by other mainstream manufacturers. This makes the plastic easy to clean up, but you also need to be careful not to take chunks out of the kit parts when removing them from the sprues.

More recently Airfix has moved to a darker, shinier plastic with a harder surface texture. I think I prefer the newer plastic.

Surface textures are crisp and fine. The recessed panel lines are very well done.

The wings, rear fuselage and tailplanes are finished in a stretched fabric effect. This is subtly done and quite convincing.

The cockpit looks okay on the sprues. A



Fuselage halves.



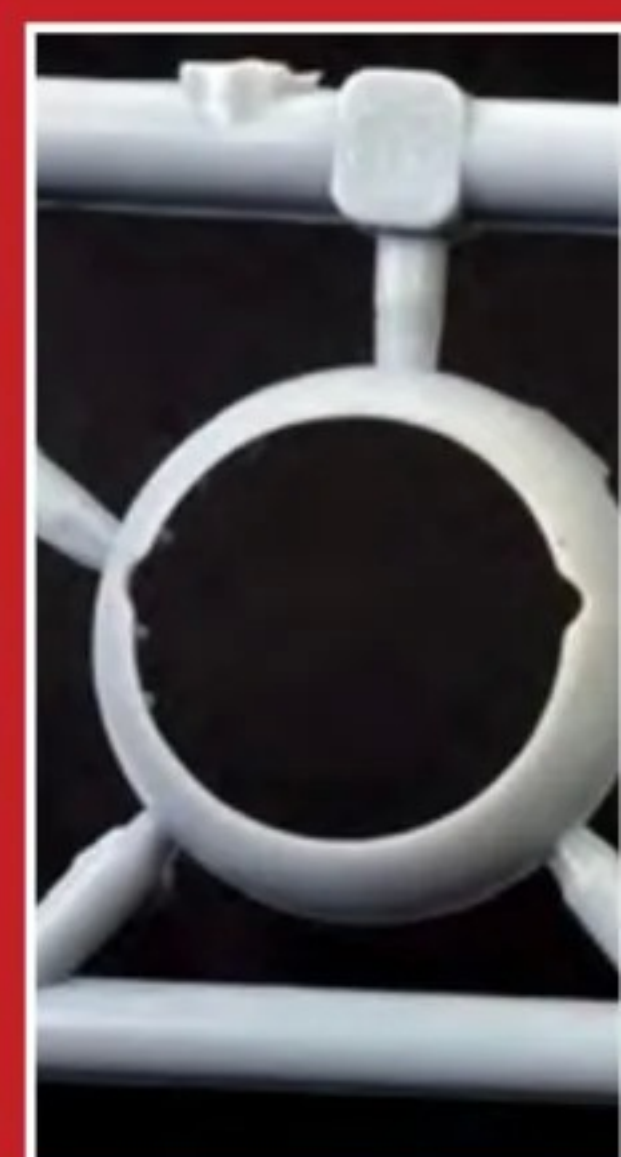
Nasty wound in the throat there...



Subtle fabric textures.



Skis are included as a landing gear option.



The engine is simple





# FREEDOM TIGER

1/48

#11182

The famous twin-engined supersonic jet F-5E Tiger II in the markings of the US Air Force, US Navy, US Marines, South Vietnam, Democratic Republic of Vietnam, Brazil and Thai Air Forces.

- Freedom Tiger F-5E
- Plastic parts AFV Club
- Brass 3D print parts for added detail
- Photo-etched pre-painted parts
- Die-cut masks for easy painting
- Decals for 8 marking options



## INFO | Eduard

Eduard monthly magazine with historical articles and modeling topics. More than 100 pages! Free download at [info.eduard.com](http://info.eduard.com)

[www.eduard.com](http://www.eduard.com)

decal overlay is provided for the otherwise flat and featureless instrument panel. You'll have to source your own harness straps too. Eduard already has you covered there with a couple of detail sets already including the interior and canopy masks.

A seated pilot figure is supplied. He looks a bit blobby in the massively enlarged photo but he looks good in real life. You will have to treat that nasty wound in his throat though!

Kit engineering is thoughtful. The upper and lower wings are both full span single parts and there are only two interplane struts on each side. Airfix has moulded the two struts on each side joined by an "X" shaped brace. Make sure you do not cut this brace off when you remove the struts from the sprues. The brace will ensure the correct position of the two struts. The braces may be cut off after assembly when the joins between the struts and the wings are thoroughly set.

The rudder is supplied as a separate part. All other control surfaces are moulded in the retracted or neutral positions. as are the

landing flaps.

The engine is simple but adequate with only nine parts including cowls, exhausts and intakes – but the moulded detail is good. Braces are moulded with the cowl ring in a single part. This is a nice touch in an otherwise potentially fiddly area. Cowl flaps appear to be moulded slightly open.

Plenty of useful options may be found in the box including the choice of two-bladed Watts propeller or three-blade de Havilland propeller, separate caps for the propeller spinners, starter cranks and more.

Airfix has supplied two sets of wheels. Once has bulged and flattened tyres to represent the aircraft on the ground, and an alternative set of unweighted tyres if you plan to depict the model in flight (a stand is available separately).

A set of undercarriage skis is also on the sprues although they don't apply to the marking options supplied in this box. There are a number of after-market decals with skis though.

Clear parts look good.

The five parts include two styles of separate windscreen and overlapped sliding canopy section if you wish to pose the canopy open.

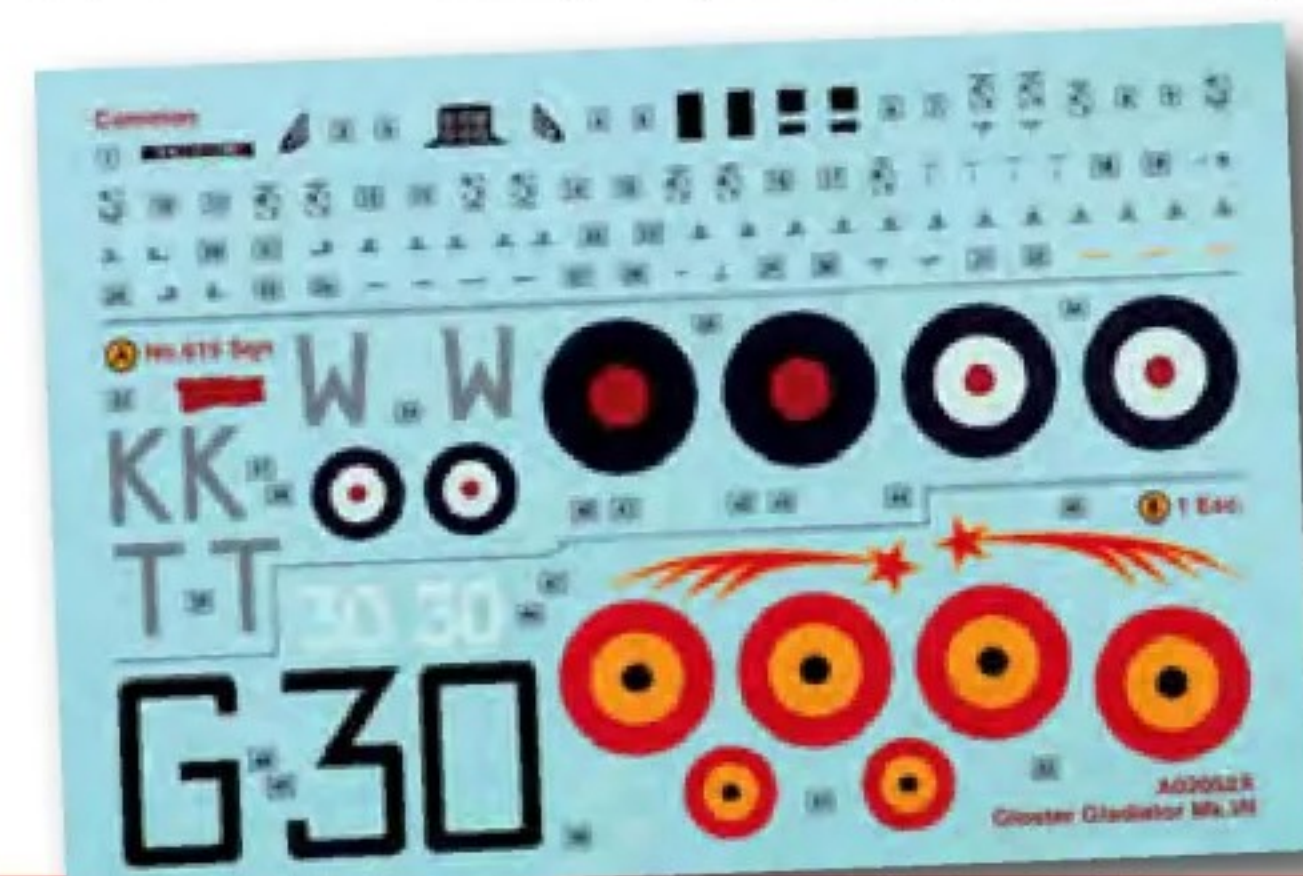
Two different parts are included if you wish to pose the canopy closed.

Markings are offered for two aircraft:

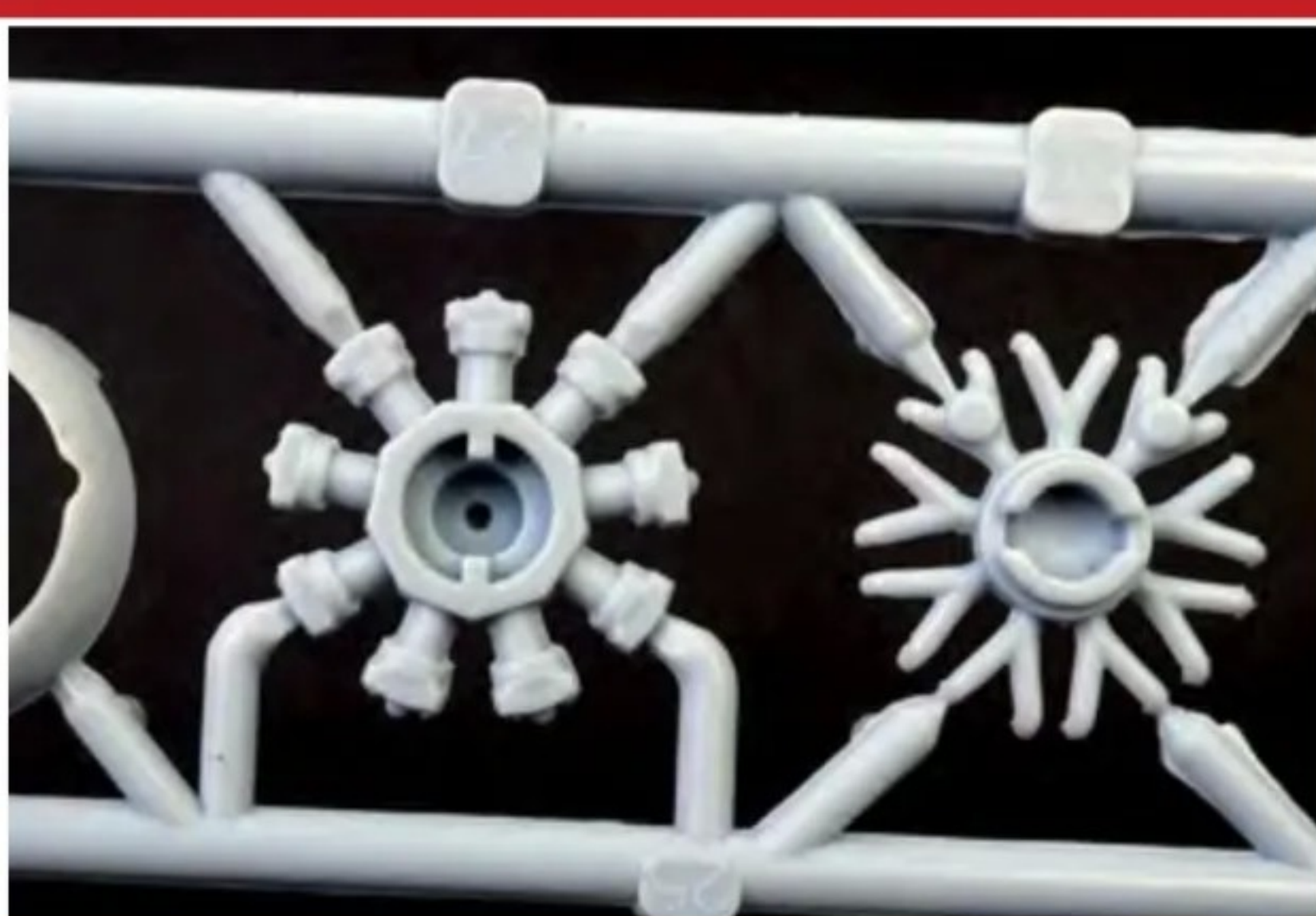
Decals are glossy in finish, with good colour saturation and registration.

Airfix has delivered another sweet little kit with their 1:72 scale Gladiator. Detail is good, surface textures are restrained, options are useful and parts breakdown is clever. This kit will be suitable for modellers of all skill levels.

Sample purchased locally by reviewer. •



Markings for two options.



but adequate.



The two full-span wings.



Clear parts.



# CLASSIC W



**Mark Casiglia** Mark revisits the 30-year-old 1:48 scale Tamiya F4F-4 Wildcat. In this article, Mark finishes painting and weathering.

**A**fter removing all the masks, I began to work on painting the insignias and rudder stripes. This started with masking these areas away and airbrushing AK Real Colors RC222 Insignia White FS17875, staying very light to allow the underlying contrasts to show through and keeping away from the very edges to avoid

the tell-tale white edge line that is often seen with painted markings. With the base white down, I began to apply the star masks into the insignias, only to find that in all areas they were too small. The problem that occurs with Montex masks is that over time there will be some shrinkage of the vinyl, which I assumed had occurred here. Fortunately the

original masks must have been made exactly the same size as the kit decals so I scanned the decal sheet, separated the stars out and cut some masks myself using a Silhouette Portrait II cutter and Oramask 810 adhesive vinyl, which is exactly the same as what Montex provides. I was very pleased to find that my new stars fitted perfectly. With that,



# ILDCAT

## Part Two - Painting and Weathering Continues



I positioned them and proceeded with the lightest coat of Mr Color C326 Blue FS15044 that I could get away with.

Once dry I removed the star masks and started to lay down masking for red areas, being the central insignia circles and the red tail stripes. The circle masks were positioned by first laying down the solid dots in the dead

centre of the stars, then laying the masks around them and finally removing the dots. This made perfect mask positioning very easy.

The tail stripes were made by measuring the decal width and masking accordingly. Although I have many sizes of masking tape, I had no exact matches so I used my Infini Easycutting Type A mat which allows cutting

tape at virtually any width needed. The trick to spacing them perfectly was to lay down strips against each other and remove every 2nd strip as the process progressed. As with the previous colours I remained very light with application of Mr Color C327 Red FS11136 and erred towards less opacity since my final aim was to create a faded look. ➤



## ◀ THE REVEAL

After removal of all masking I was very pleased to see that there was absolutely no touching up needed. Because the paint was dusted on lightly there was no potential at all for bleed-through under the masks. There was more work to do, with the serial codes in black. Once the masks were carefully positioned, I used a light application of AK Real Colors RC071 Black 6RP, which is more like a very dark grey and more along the lines of the faded black appearance I was aiming for. Once again the masks were removed I was able to verify a neat, bleed-free result.

Meanwhile along the way I had painted the propeller, using Mr Color C329 Yellow FS13538 for the tips and Tamiya XF-85 Rubber black for the blades. The only things missing were the tiny decals on the four propeller blades, on each side of the fuselage under the cockpit sill and on each side of the tail. After applying the tail decals I quickly removed them as I noticed many references where they were absent and frankly if I could avoid dealing with the thick carrier film of Tamiya decals I would. So I applied the others using Micro Set and Micro Sol to settle them nicely, then after plenty of time to set, I dabbed two coats of My Hobby H30 Gloss Clear over the decals and past the carrier film margins, using a disposable micro-brush. The idea was to let this set then carefully sand it back to disguise the step of the carrier film. This worked well enough although it resulted in a colour shift over those areas which was taken care of easily enough by protecting the decals with tiny blobs of Blue Tack and spraying a very light layer of base colour around them to blend the colour.

## RUNNING REPAIRS

At this point I noticed the tail stripes weren't perfectly in line with the surrounding rivet and panel lines. It was bothering me enough to consider re-doing them. I realised that the problem occurred because the tail was already fully masked before I laid down the stripes, so this time I knew I needed to apply the stripes while being able to see the adjacent panel and rivet lines properly. So I masked the rudder, applied Mr Surfacer 1500 white as it is very opaque, put some basic pre-shading down with Tamiya LP-27 German Gray and an Artool spatter mask and then laid light a light application of RC222 insignia White. I then completely removed the masking on the tail portion to view the panel and rivet lines and laid down new stripes before re-applying the tail's masking and airbrushing a very light, patchy layer of C327. After removing the masks I was much happier with what I saw as the stripes were dead level.

With all the painting done, it was time to glue the landing gear into place. I knew that it would be critical to bond this assembly perfectly to ensure the dihedral remained level. I used Revell Contacta cement since it is a slow setting gel which therefore allows some adjustment of parts before it sets. I carefully measured the height of the wings tips from the navigation lights on each side down to the bench and adjusted the landing gear as needed to ensure each wing tip measurement was identical to the other. Once fully cured, I clear-coated the entire model as well as ➤



Montex masks were carefully re-applied around the existing unpainted insignia areas in preparation for white.

My chosen colours for the insignias were Mr Color C327 Red FS11136, Mr Color C326 Blue FS15044 and AK Real Colors RC222 Insignia White FS17875.

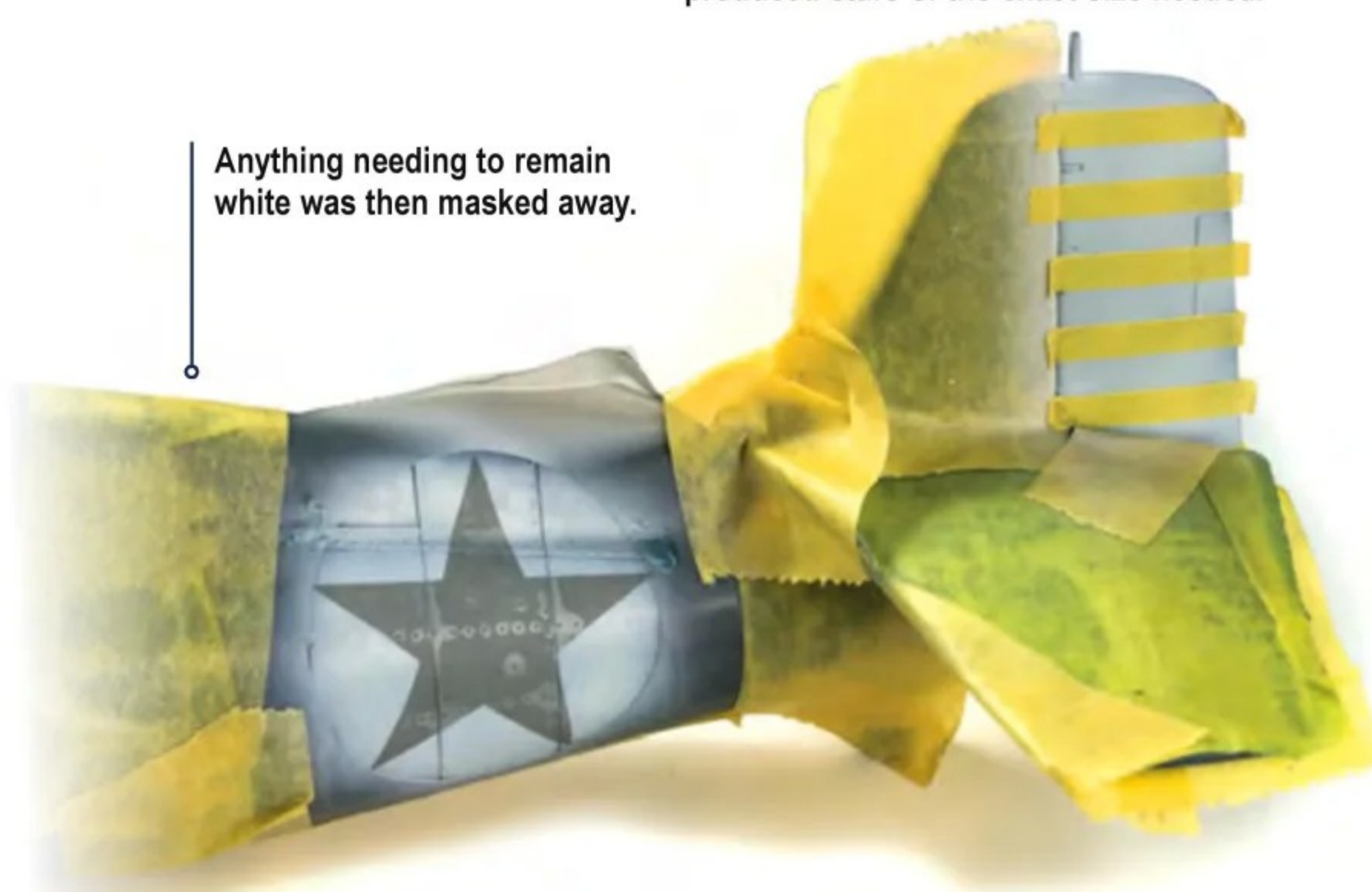
The white layer was carefully applied to avoid losing underlying textures, but also to avoid painting right against the edge of the mask as this produces not only a thick paint edge but a tell-tale white line around the edge of the insignia.



An Infini Easycutting Type A mat makes trimming tape to match tail decal stripe widths very easy.

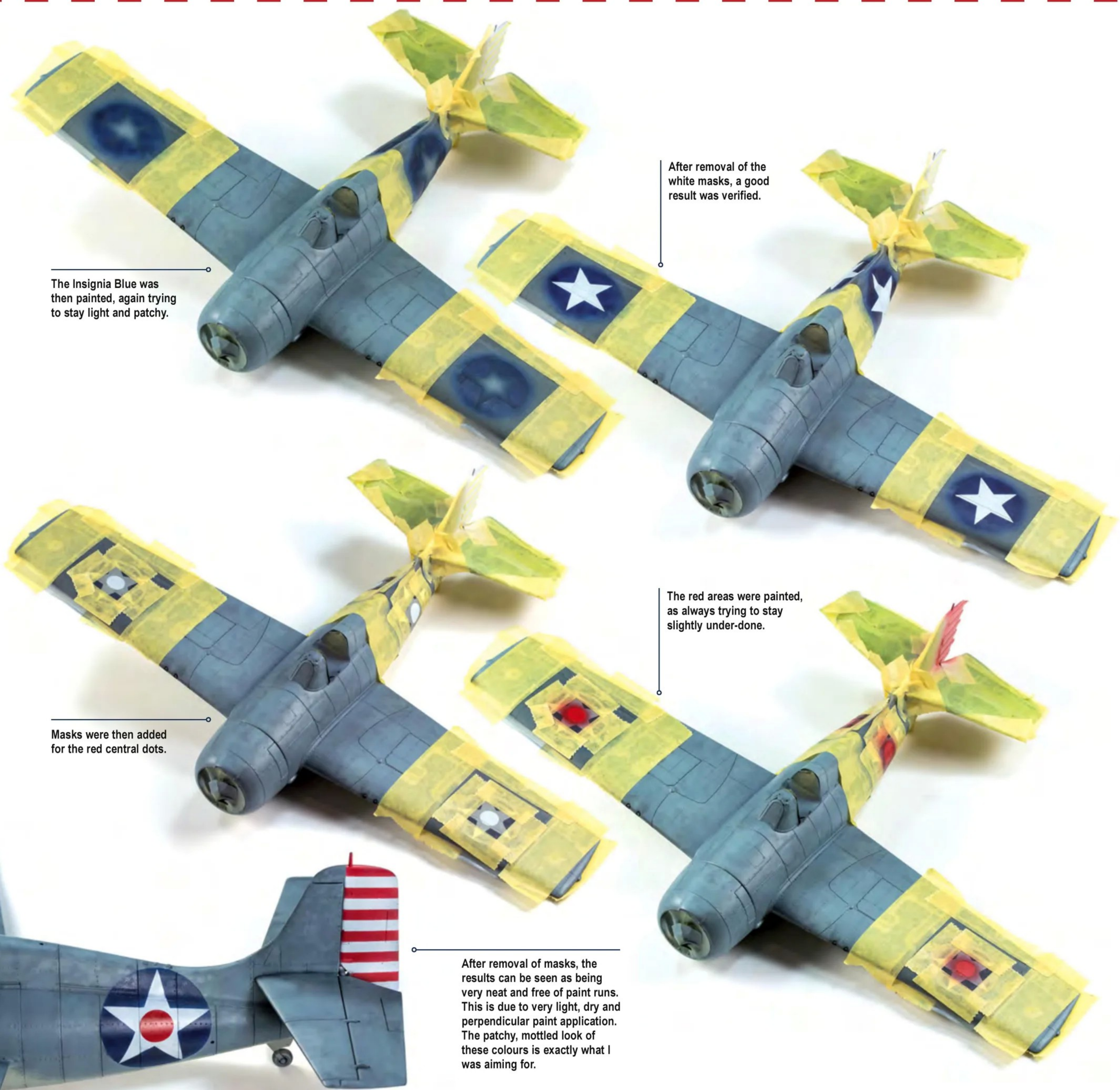


The Insignia stars in the Montex set were strangely too small as the points didn't extend to the edge of the circles. Fortunately, home-cut star masks created from a scan of the decal sheet produced stars of the exact size needed.



Anything needing to remain white was then masked away.





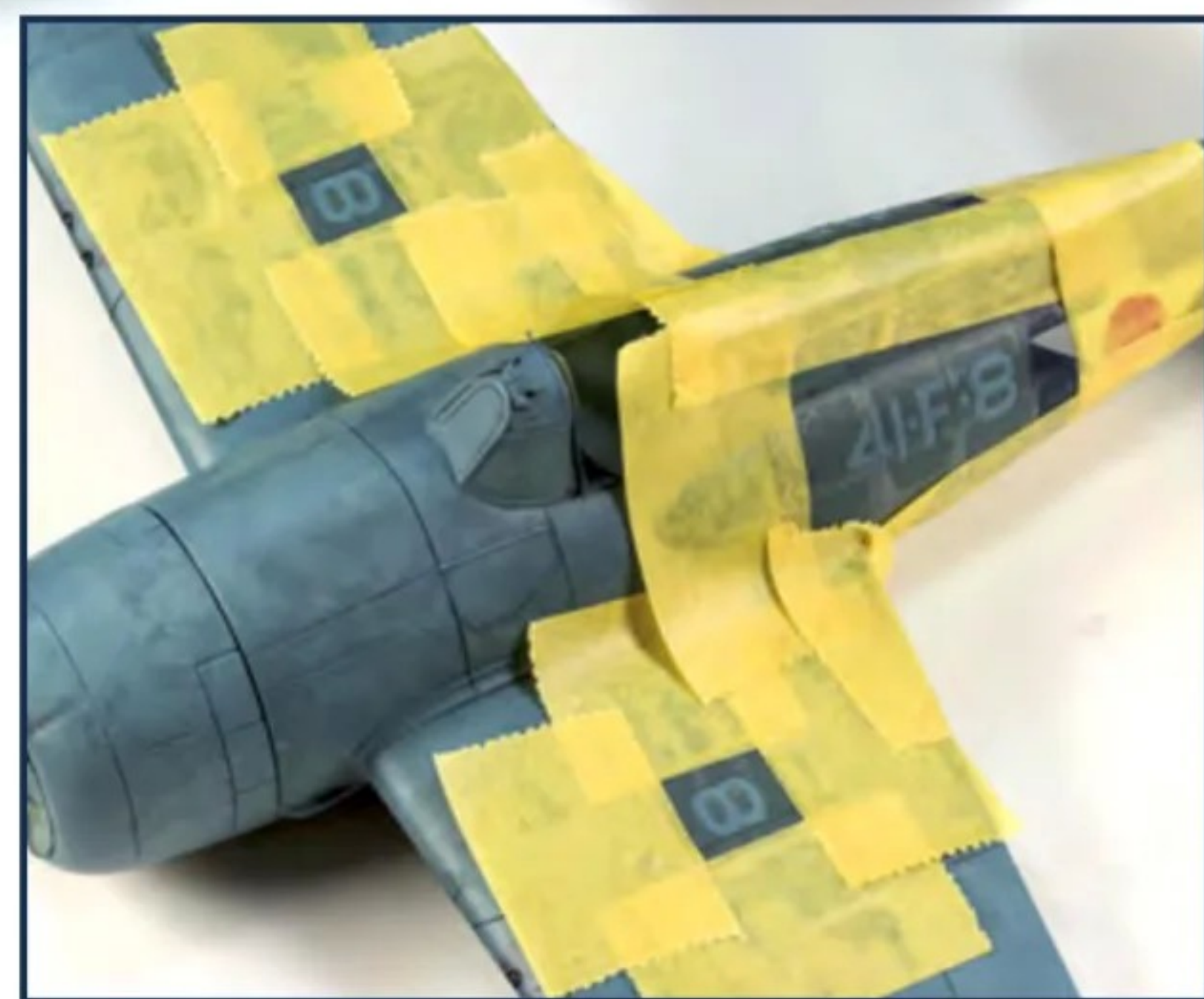
The Insignia Blue was then painted, again trying to stay light and patchy.

After removal of the white masks, a good result was verified.

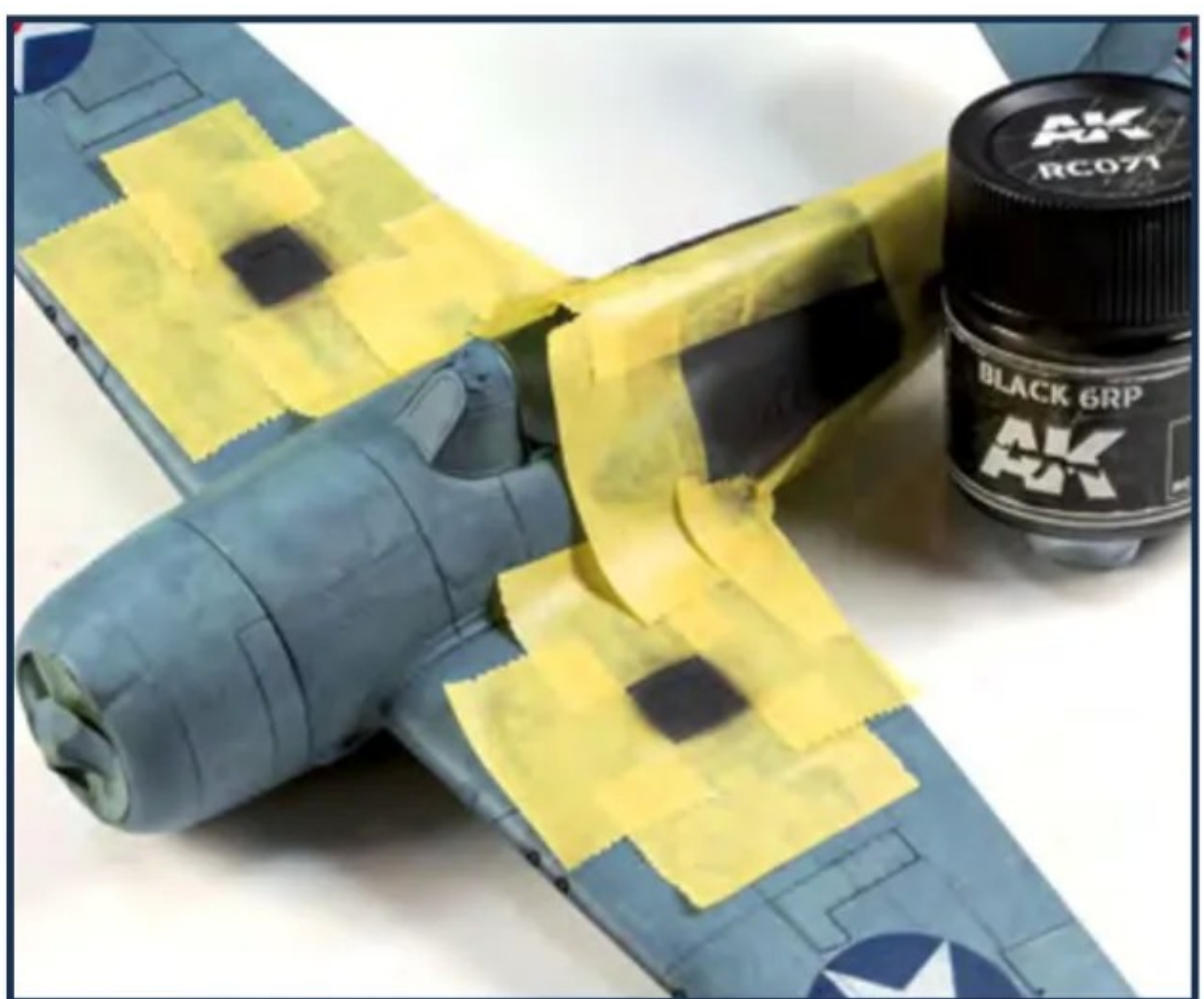
Masks were then added for the red central dots.

The red areas were painted, as always trying to stay slightly under-done.

After removal of masks, the results can be seen as being very neat and free of paint runs. This is due to very light, dry and perpendicular paint application. The patchy, mottled look of these colours is exactly what I was aiming for.



Areas requiring black paint were masked next.



I chose AK Real Colors RC071 Black 6RP which is more like a very dark grey, to give a sense of in-built fading that I was looking for.



Again a very neat result was verified after removal of the masks.





PlusModel lead 0.3mm wire was used to add detail to the landing gear.

◀ peripheral items such as sliding canopy, wheels, mast and drop tanks using Tamiya LP-24 Semi Gloss Clear, diluted 50:50 with Mr Levelling Thinner. This is a superb product as it delivers a smooth and durable satin finish, perfect as a base for the oil-based weathering steps to follow.

Inspecting the model and planning the final steps, I noticed that I had unintentionally obliterated the aft-most of the three underside navigation lights, because it spanned across the fuselage seam and was lost during sanding and polishing the joints. I used a circle template and stitching awl to scribe a new light fitting to match the existing moulded ones. The initial result looked a little stark as the scribed lines were deeper than the moulded neighbouring ones, but sanding, panel washes and painting of the lights later in the process resulted in a more blended result.

## WEATHERING CONTINUES

The next step was the panel line wash. I had seen examples of this model built where the panel lines were treated with a black wash and to my eye this looked too stark and unconvincing, so I knew my challenge was to bring out the panel lines without drawing undue attention to them. I figured that dark grey was my answer so I mixed black and white oil paints with odourless solvent and painted the entire model with this dilute oil paint mixture and allowed it to dry. It was then wiped away with a soft cloth dampened- but not overtly wet- with odourless solvent. The

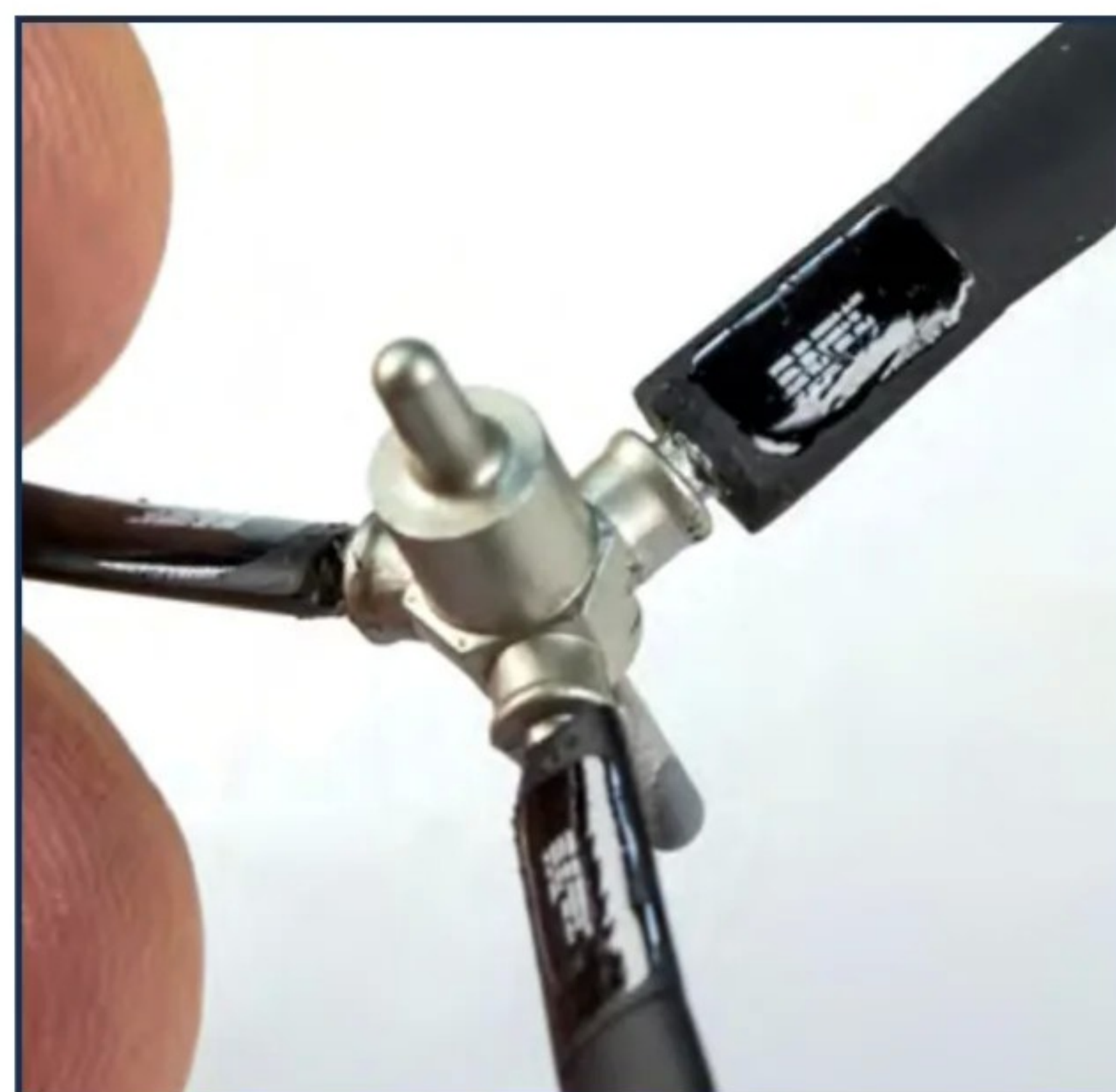
result was exactly what I was after. The pre-shading efforts also created an unexpected benefit as some panel lines were already quite dark while others weren't, so this created some welcome variation. Uniformity is the enemy of a natural looking result.

The next stages of weathering involved mostly dry brushing of oil paints. Exhaust, cordite and grime stains were achieved with different mixes of black and burnt umber oils. The dryer the brush, the better since it's easier to add more colour than to erase what it already down, which can quickly create a mess. Another use of dry brushing oils was utilised to great effect on this model, where a small amount of white was mixed with transparent oil paint to create a very

translucent white mix. When selectively dry brushed over the surface of the model it created a convincing faded look which could be either left as it was or faded back by using a large make-up brush to blend the effect. The only area where oil paints were used wet were the drop tanks. Fuel spillage around the tank caps was done by dotting some burnt umber around the cap, dragging it out with a brush here and there, and then flooding it with brush-touched straight odourless solvent with the drop tank sitting level with the bench. Gravity then takes care of the rest as the solvent causes the paint to run and find its own way down the tank, creating spillage which looks more organic and less contrived than other methods such as freehand painting. ➤

The wire was secured at one end with CA.

A paint brush handle was used to create a smooth curve, and after the wire was cut and bonded at the other end with CA, it was brush painted using Tamiya XF85 Rubber Black enamel paint.



There were a couple of areas where the very thick Tamiya decals needed to be utilised. After placement of the decal, a layer of H30 Gloss Clear acrylic was applied with a micro-brushed and allowed to set fully.



The gloss clear was sanded back to try to lose the appearance of the decal edge.



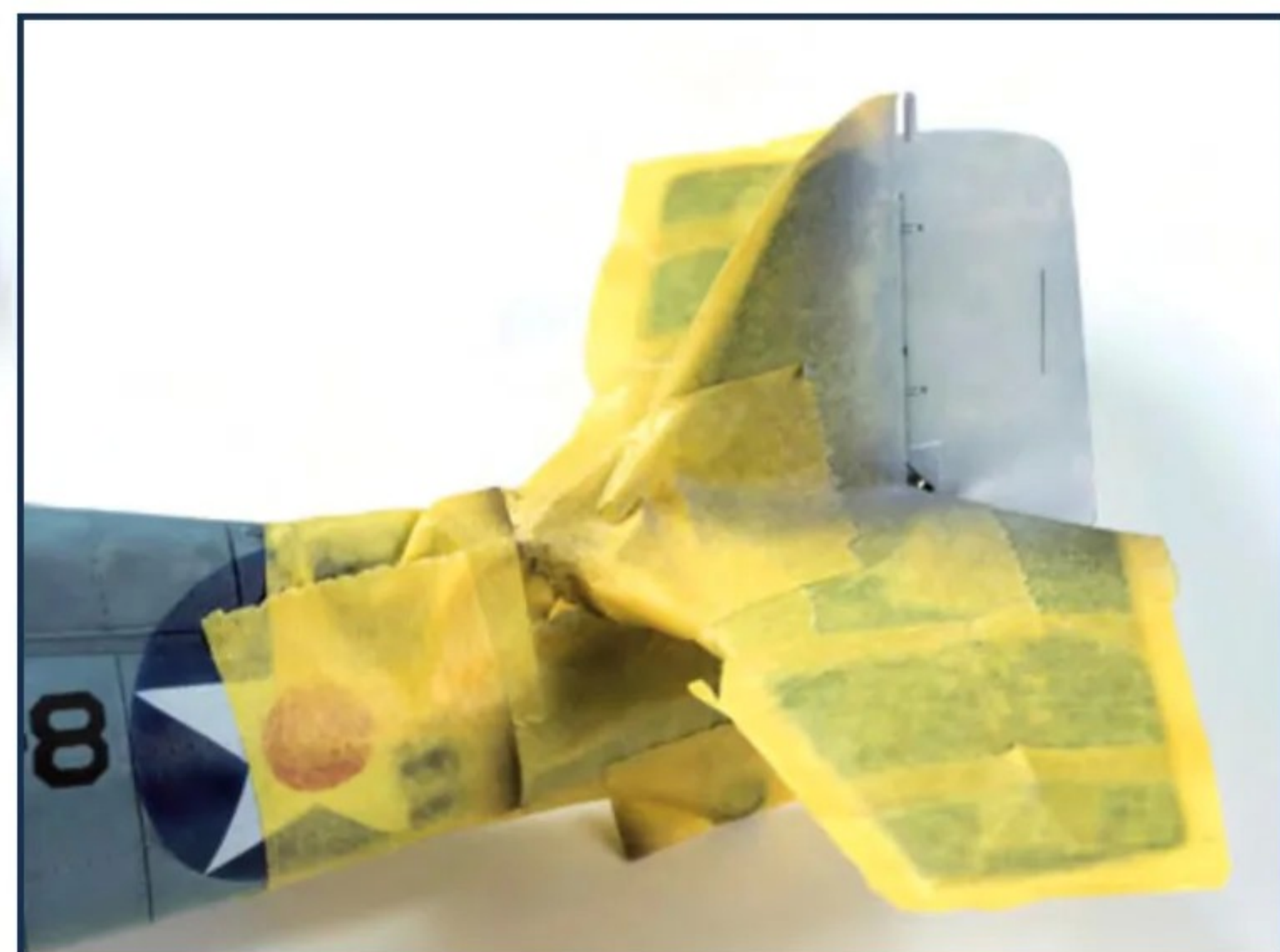
After a flat coat, the decal edge cannot be seen.



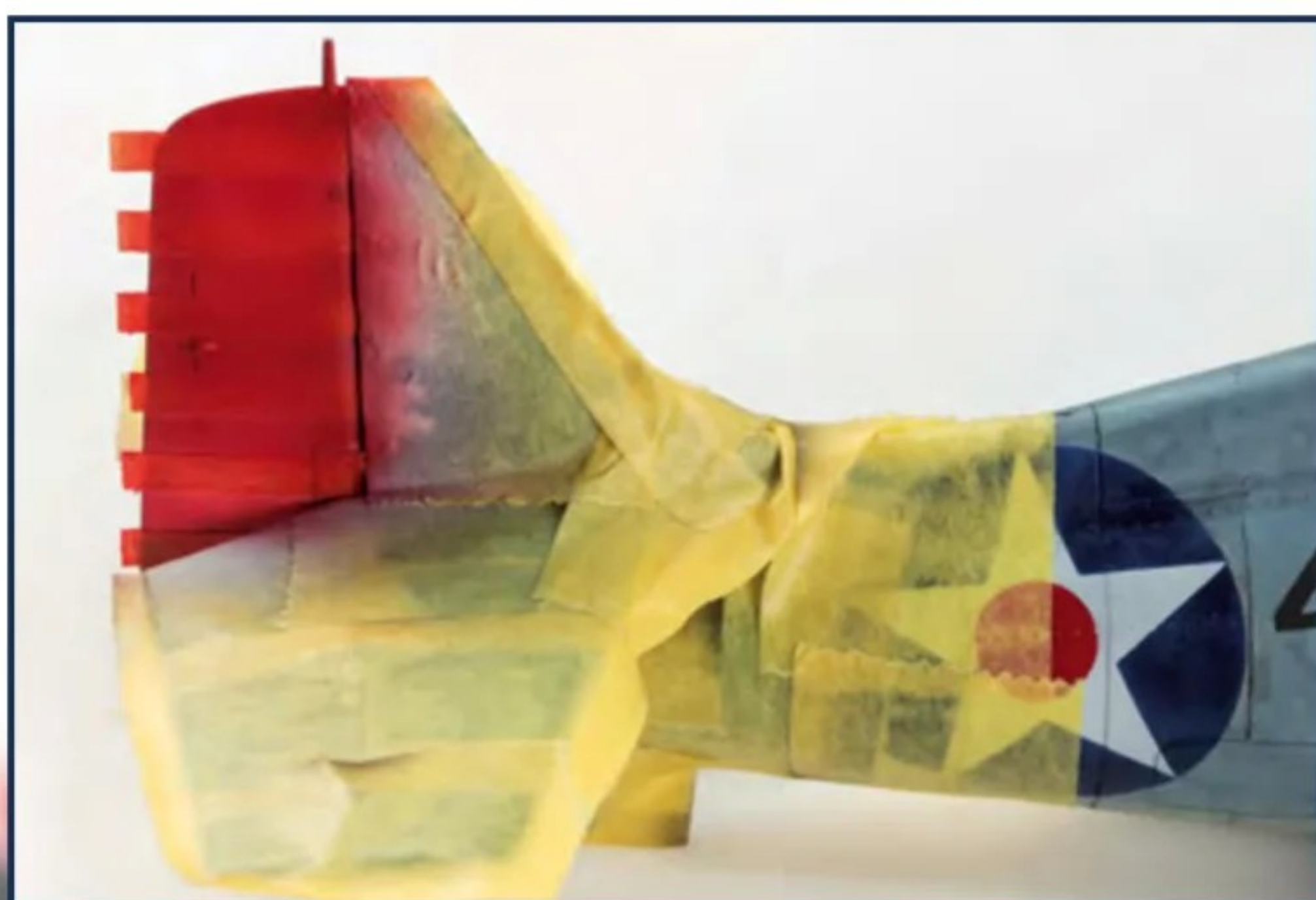
After noticing the tail stripes were slightly off parallel with neighbouring rivet lines, the only solution was to slightly sand, mask, apply Mr Surface 1500 White and apply some basic pre-shading with LP-27 German Gray and a spatter mask in preparation for a re-do.



The base textures ready for final painting.



A very light coat of RC222 Insignia White.



Placement of stripe masking and a light, patchy coat of C327 Red.

After removal of masks, the lines are verified as being parallel to the rivet lines on the tail.



The landing gear was bonded in place with slow drying Revell Contacta cement. The plane was rested on its landing gear and minor positional adjustments were made until each wing tip was the same height off the bench.



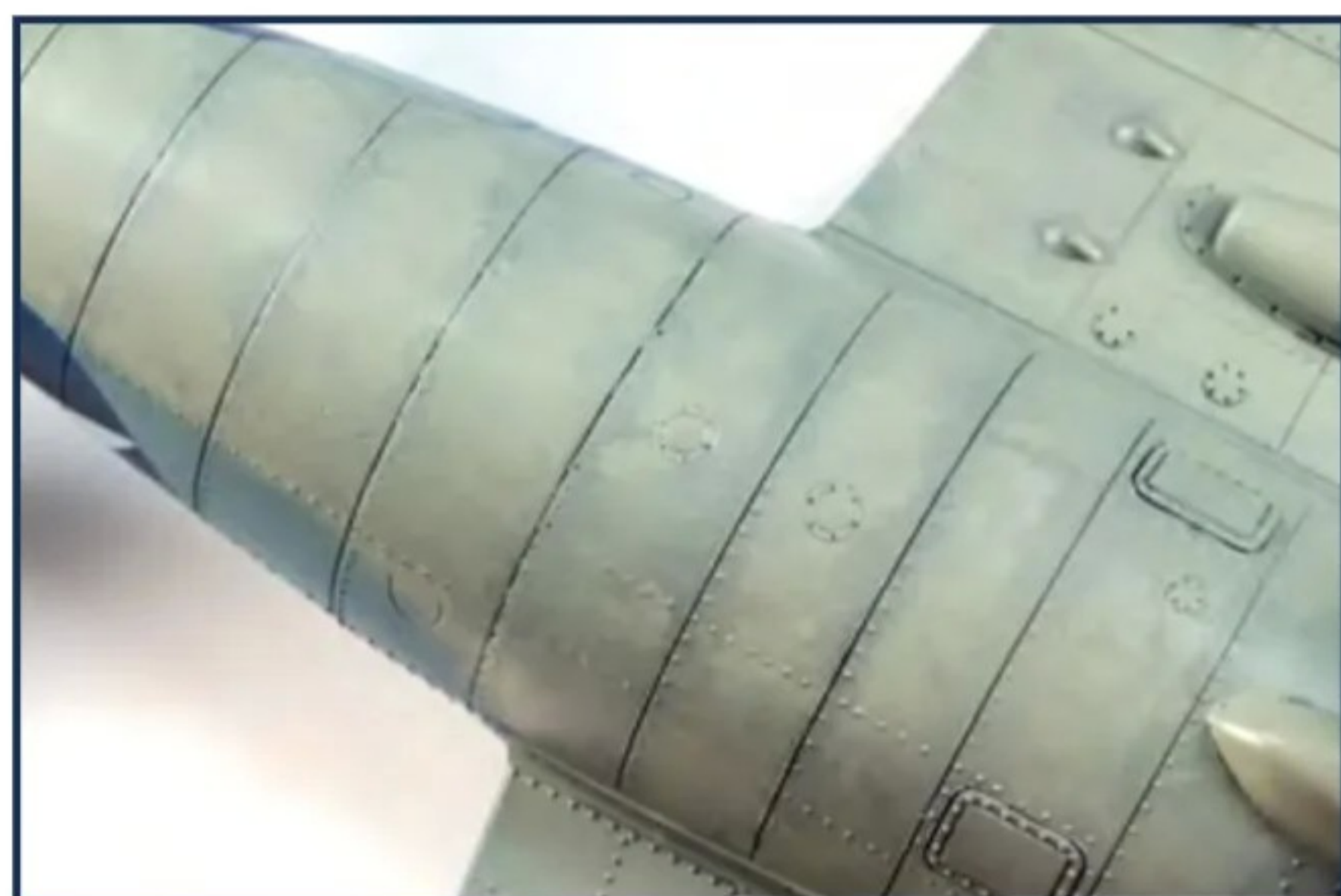


## ◀ SEALING THE DEAL

With the oil paint work complete, I wanted to give the model the flattest finish I could achieve, and Mr Color GX113 Super Clear III UV Cut was the product for the job. I used it diluted 50:50 with Mr Levelling Thinner and it resulted in the smooth, flat finish I was hoping for. The tyres were given an additional coat of Testor's Dullcote and this product results in the flattest finish I know. I then used a Prismacolor silver pencil to add some subtle chipping around some panel lines on the upper wing surfaces and leading edges. The propeller blades were given a light treatment to replicate paint wearing rather than overt chipping since this was to be a carrier based aircraft where there wouldn't be rocks and gravel that their land-based counterparts had to deal with.

Other touch ups included painting the gun tips using Tamiya X-10 Gun Metal and painting the navigation lights. Unfortunately the three underside lights and the wing tip lights are moulded in solid styrene so I needed to think of something to make them look at least vaguely like lights. I painted them using Tamiya X-11 enamel and when dry I used a micro-brush to overpaint them

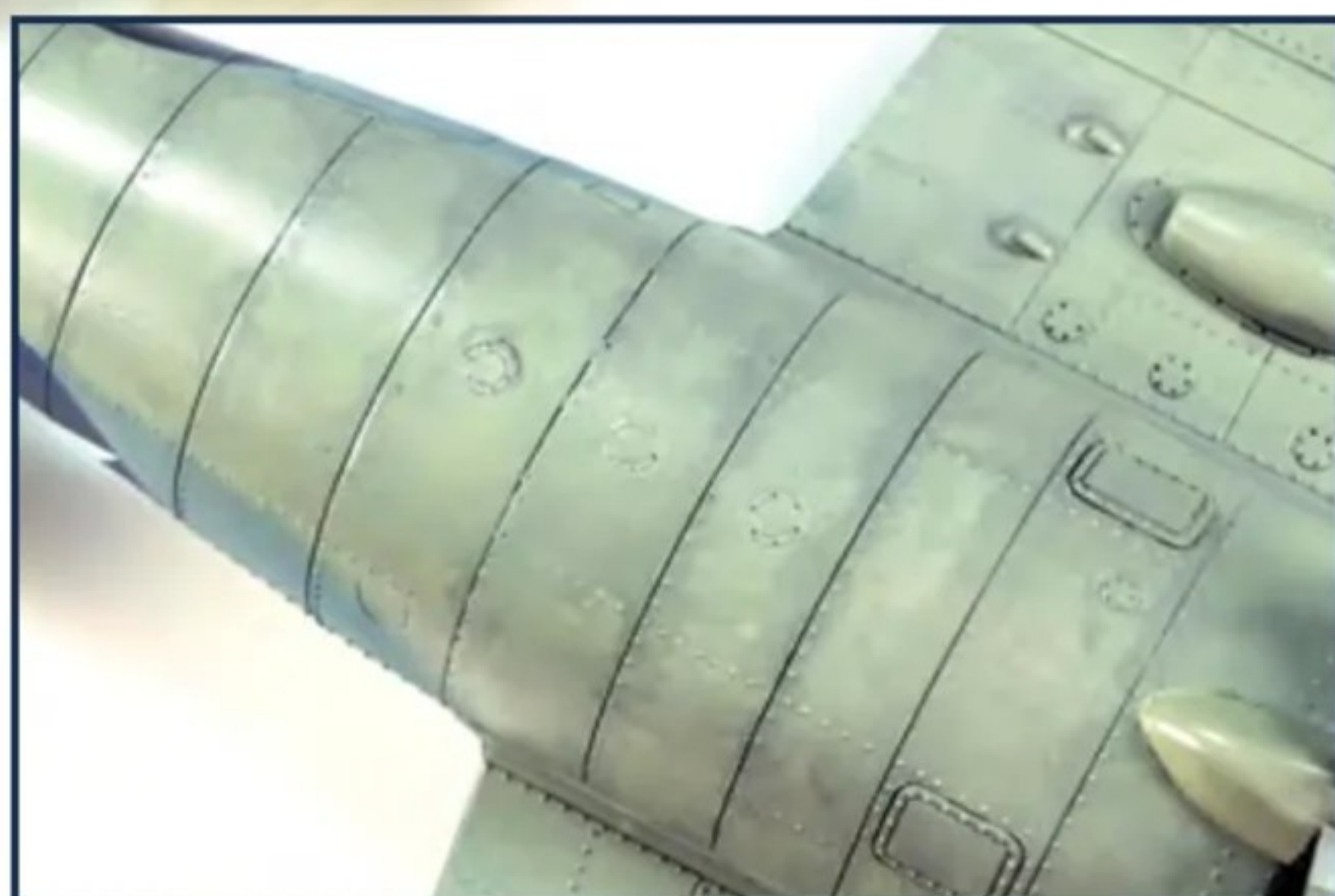
Tamiya LP-24 Semi-Gloss Clear mixed 50:50 with Mr Levelling Thinner makes an excellent satin coat.



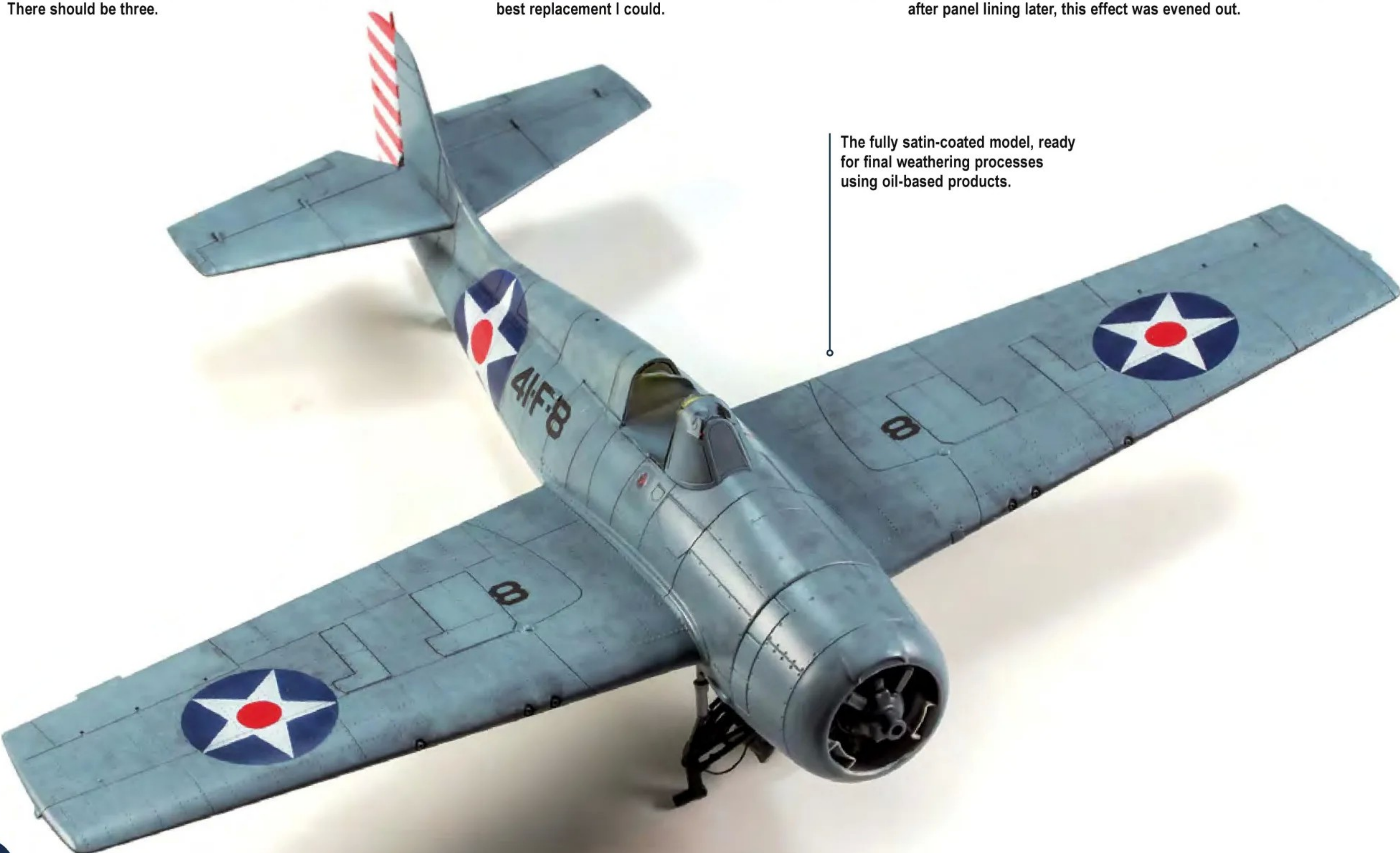
Prior to satin-coating I noticed the missing navigation light. There should be three.



I used a sharp instrument and circle template to create the best replacement I could.



The new navigation light. A little more pronounced than the others but after panel lining later, this effect was evened out.



The fully satin-coated model, ready for final weathering processes using oil-based products.





A dark grey panel line wash was mixed from white and black oil paints, heavily diluted with odourless solvent.

using the relevant coloured clear paint. The wing tip lights were given a decent layer of coloured clear but the underbelly lights were intentionally kept light on colour as I figured they would look toy-like if the colour was too pronounced. Once complete, I again used a micro-brush to apply 2 coats of Deluxe Materials Looks Like Glass to bring out a lovely clear shine.

## FINAL WEATHERING EFFECTS

Finally I looked towards Tamiya Weathering Master sets B, C and D to give me the colours I needed to add more weathering effects, mainly around exhaust stains. The metallic pastels were also good to highlight the gun tips after black soot was applied over these areas. I keep extra eyeshadow applicators around since those in the kits wear out quickly.

Now that everything was fully painted and weathered, I added the wheels and drop tanks. I started with the tanks, using Revell Contacta to allow me the time needed to adjust the angle of the tanks as there was a little wiggle room in their fit, and they should



The entire model surface was evenly coated in the dark grey oil wash and allowed to dry.

lay perpendicular to the ground rather than to the wing surfaces.

The wheels had no margin for error since they had a very ambiguous fit, which is surprising for Tamiya. The wheels needed to be parallel to each other as seen from above and from the front, and obviously parallel to the long axis of the airframe. I chose to use Gorilla Clear glue, which is extremely slow setting and allows almost endless adjustments whilst providing a very secure final bond. I sat the plane on its wheels as the glue set, and continually used a small metal ruler against

the bench surface to continually nudge the wheels into their alignment. Once satisfied, I walked away for a couple of hours to let the glue harden fully.

Getting close to finishing, I needed to rig up the antenna wires and I thought this should be an easy enough process but I ended up doing it three times before I was happy. My first attempt was using Modelkasten 0.2mm elastic rigging. Being very shiny, the CA I was using to bond it had difficulty gripping which resulted in too much of a glue deposit. Also, the tension it required to stay taut caused ➔



After removal of the excess panel wash using a soft cloth very lightly damp with odourless solvent, the effect is accentuated details without overtly dark panel lines.

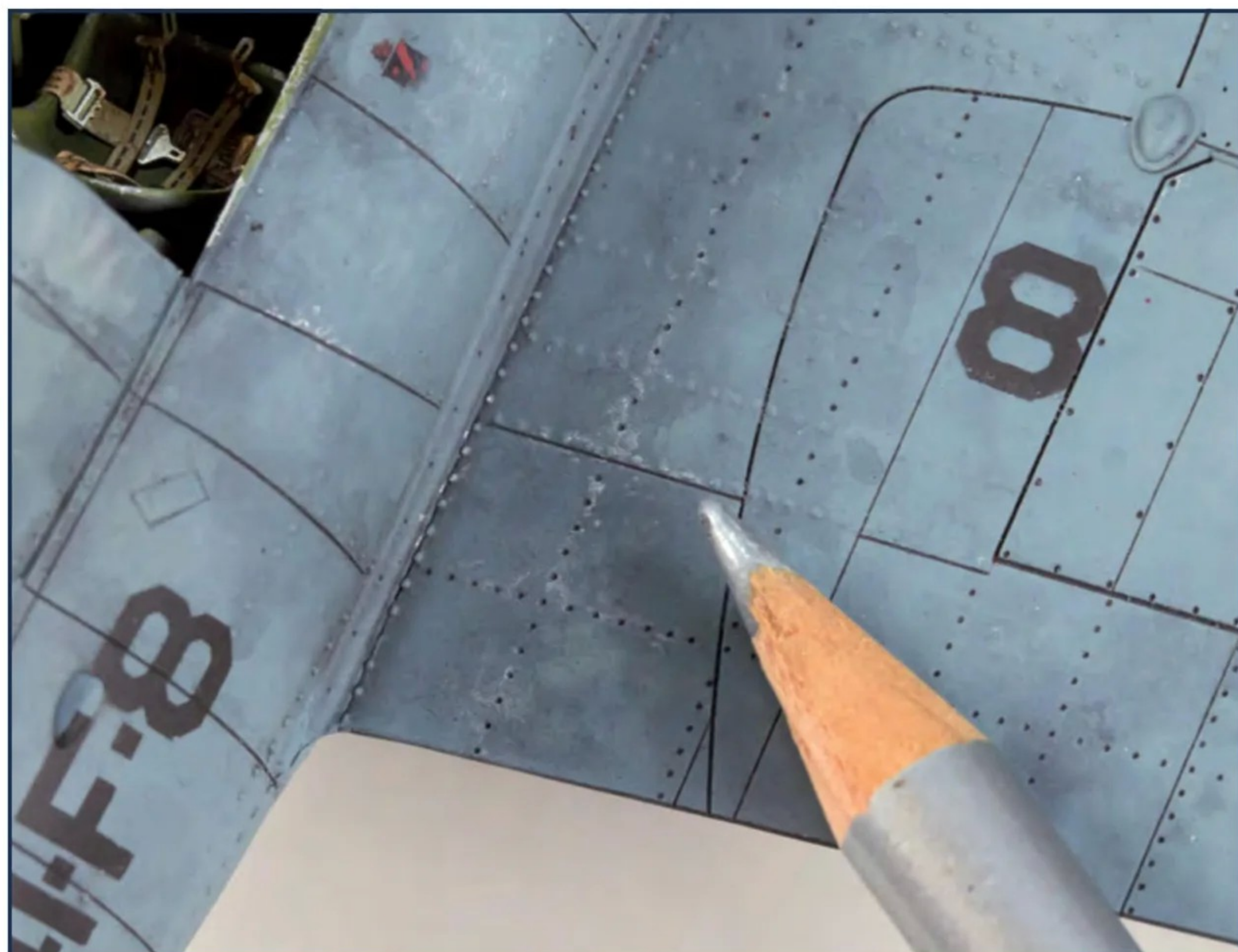




The four oil paints I used for weathering-transparent, white, black and burnt umber.



Mr Color GX113 mixed 50:50 with Mr Levelling Thinner makes an ideal final flat coat.



A Prismacolor silver pencil is all I used for minor chipping.

the mast to lean to one side. It was also too stark in appearance generally, so it was an easy decision to remove it and start again. Since I knew I didn't want anything to put more pressure on the mast, I decided to go with stretched sprue. My first attempt resulted in too thick a cross section of the wires and too dark a colour with my chosen XF-24 Dark Grey, even though it was an improvement. I removed it again and this time heated and stretched the sprue as thin as I could get it. It needed very little CA to secure and I chose to paint it with XF-56 Metallic Grey this final time, which result in something more subtle and visually acceptable. I brush touched some base colour where needed at the antenna fixing points and used AK Ultra Matte acrylic clear on a micro-brush to knock the shine off the CA glue joints.

## FINISHING TOUCHES

With that done, all I needed to do was add the pitot tube and the sliding canopy and call the project done. That would normally be a very simple affair but I had a significant stumble at the final hurdle. No issues with the pitot, but the sliding canopy was a different story. For whatever reason, the fuselage must not have been fully compressed in the spine area when bonded, because the cross section between the cockpit and mast was too wide to allow the sliding canopy to sit down in that area, since I wanted to pose an open canopy. In my efforts to seat the canopy I made the mistake of using too much force, which resulted in the canopy splitting into two pieces. The only solution was a new canopy. Fortunately, the kit is small and old, so the price was low and even more fortunately, a hobby store no more than twenty minutes from home had one in stock. So I bought a new kit purely for the canopy and set about making the new part fit. ➔

Tamiya Weathering Master pastels were used to accentuate effects already created with oil paints previously such as exhaust stains, grime and cordite stains. The secret is to apply in successive layers very sparingly until the right effect is achieved.



The finished, flat-coated wheels. Additional flat coat with Testor's Dullcote was used for the tyres.



The completed drop tanks, showing use of oil paints to create spillage effects.





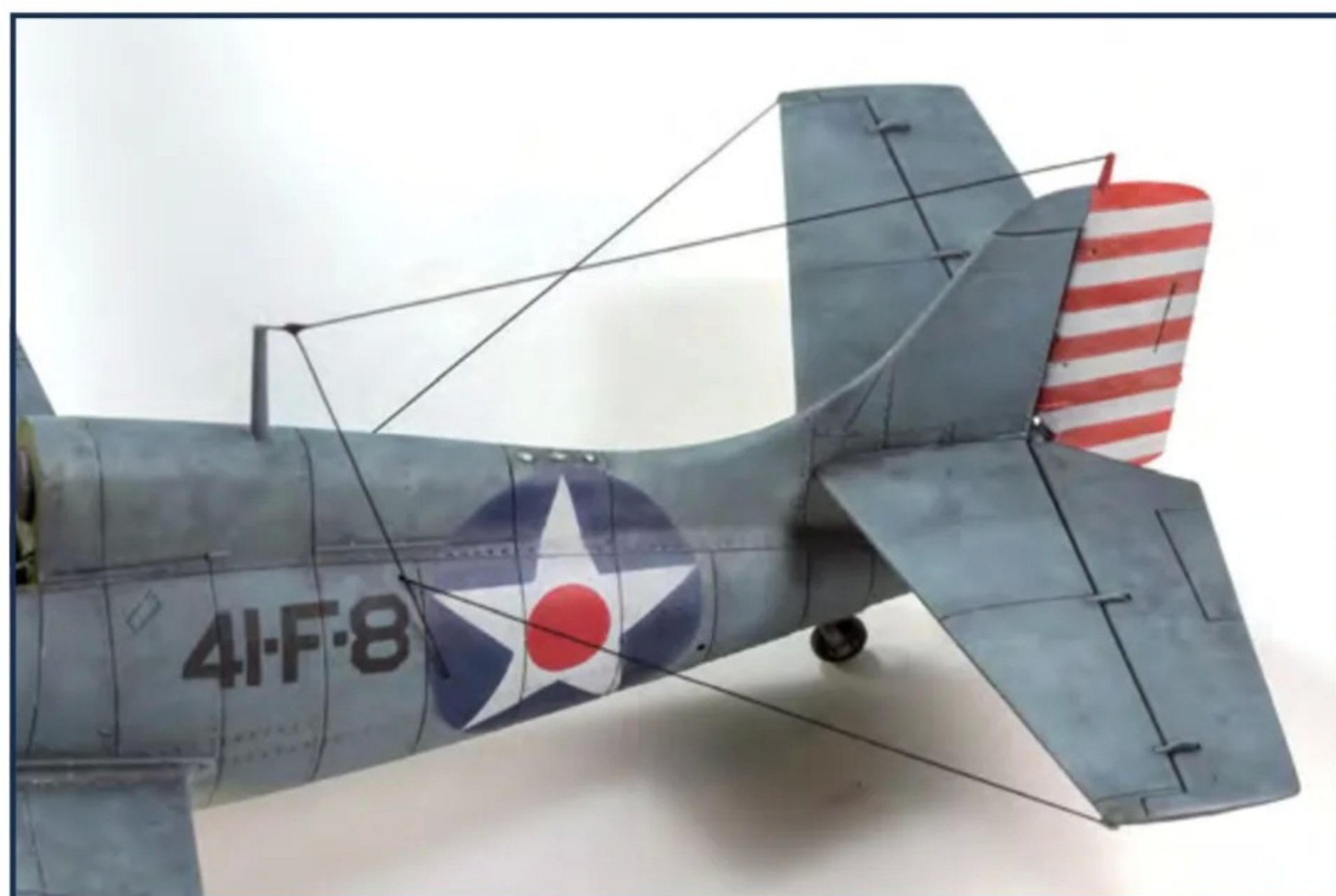


Since none of the navigation lights were moulded in clear plastic, I decided to paint them using Tamiya X-11 Chrome Silver enamel and once dry, overcoat lightly in the appropriate acrylic clear colour by hand using a micro-brush.

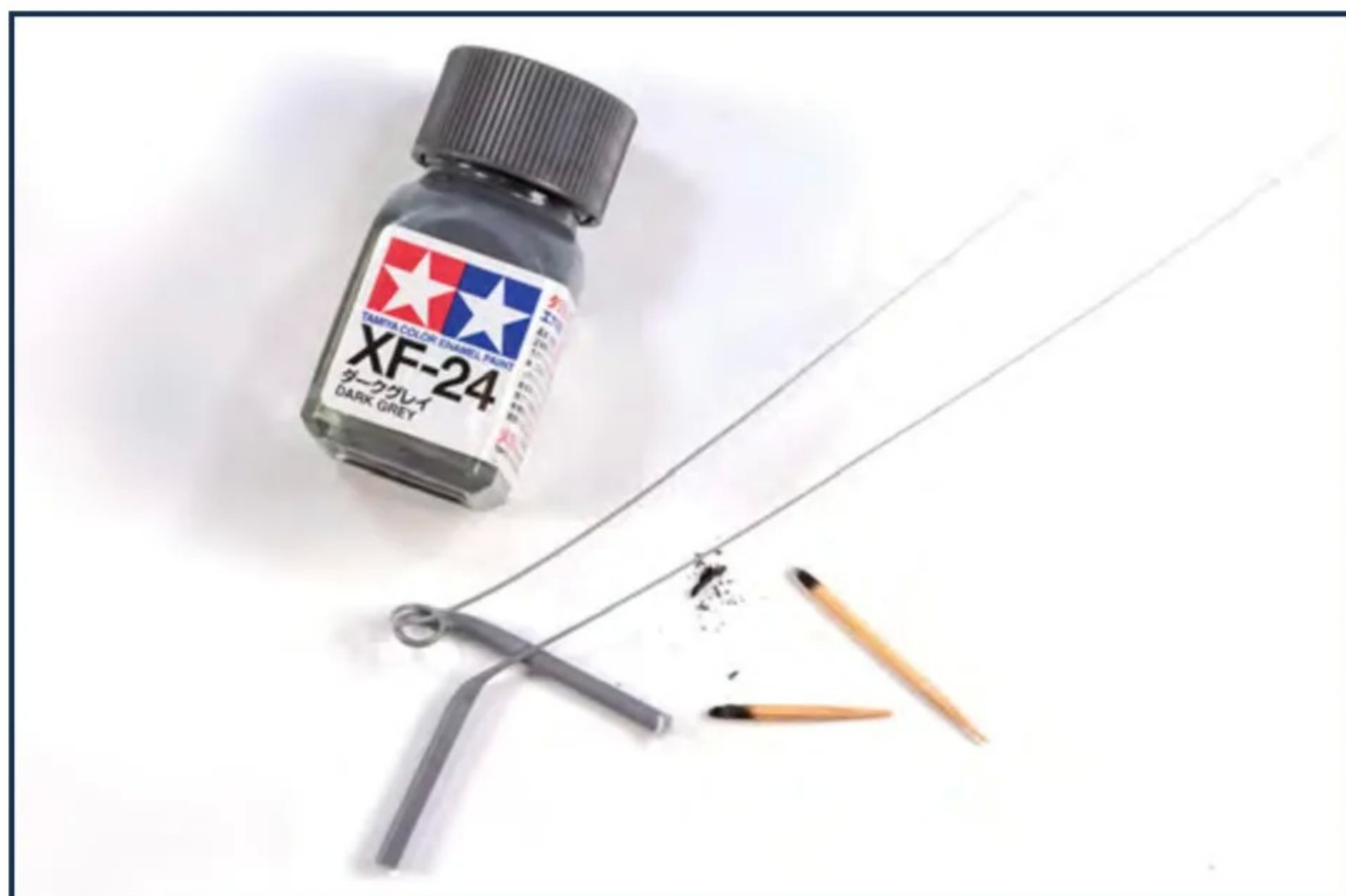
To complete the appearance of a glass light cover, 2 coats of Deluxe Materials Looks Like Glass were applied using a micro-brush.



My first attempt at rigging the antennae was using Modelkasten 0.2mm elastic rigging.



The elastic rigging looked too thick, too black and too shiny and involved too much CA to secure. Furthermore the tension was causing the mast to tilt, so it had to go.



Stretched sprue was my next trial. A burnt and still glowing toothpick is used to tension the sprue wire once bonded, and it was painted with X-24 Dark Grey enamel.



The result was better but still too prominent to my eye, so it also had to go.



3rd time lucky, I stretched the sprue further and made it much thinner, and painted it with XF-56 Metallic Grey enamel to lighten its appearance.



The final result of the antenna wires was worth the repeated efforts.





The canopy was too tight for the fuselage, which must have bonded with a slight bulge at the onset. My effort to convince it to seat only resulted in it snapping across the upper midline.



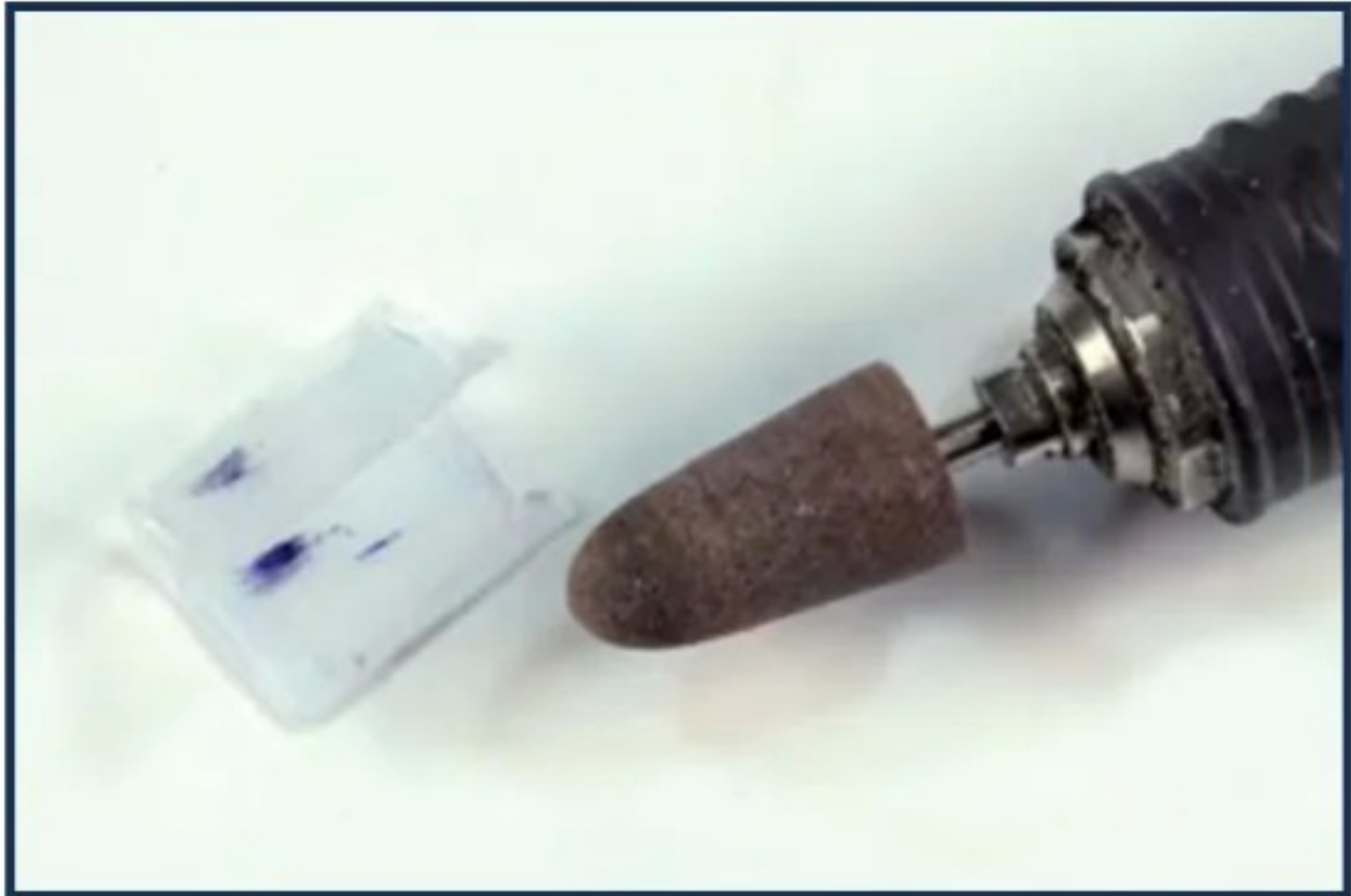
After purchasing a new kit, I test fit the canopy to get a sense of what adjustments needed to be done.



I used dental articulating film, which has one marking side and one non-marking side to show the high spots.



A firm sanding stick such as this Fine grit example from SMS was ideal for the initial high spot removals.



Once the interferences started getting closer to the curved portion, I used a rotary abrasive rubber bullet.

The canopy was finally seating passively.



After polishing with successively finer Infini soft sanding sticks and Tamiya polishing compounds, the shine was restored and the new canopy was painted the same way as the original and bonded into place with Ammo Ultra Glue.











*"After removal of all masking  
I was very pleased to see  
that there was absolutely no  
touching up needed."*



← My approach was to use single-sided dental articulating film, with the marking side facing the canopy, and I went through a process of seating and adjusting the marked high spots until I could get the canopy to sit down passively. For the initial flat side adjustments, a stiff fine sanding stick from SMS did the job very well, but once the adjustments needed to be made in the upper curved area, I used a rotary abrasive rubber bullet. Once adjustments were complete, I

used Infini soft sanding sticks in 800, 1000, 1500, 2000 and 4000 followed by Tamiya polishing compounds in Course and Fine to restore a perfectly clear finish to the styrene. Back to square one, I followed the exact same painting and weathering steps as originally done to produce a replacement canopy in surprisingly little time. This was secured into place using small dabs of Ammo Ultra Glue and with that, the project was complete. •



## MODELSPEC

Tamiya 1:48 F4F-4 Wildcat. Kit No. 61034

### Modelling Products Used:

- Tamiya Extra Thin Cement
- Revell Contacta Cement
- VMS Flexi 5K CA
- Ammo Black Slow Dry CA
- Ammo Ultra Glue
- Gorilla Glue Clear
- Micro Set
- Micro Sol

### Paints and Finishing Products

- Mr Surfacer 1500 Black
- Mr Surfacer 1500 Grey
- Mr Surfacer 1500 White
- Tamiya acrylic paint
- Tamiya lacquer paint
- Mr Color lacquer paint
- AK Real Colors lacquer paint
- Vallejo Model Color acrylic paint
- Tamiya enamel paint
- Molotow Liquid Chrome
- Mr Color Levelling Thinner
- Tamiya acrylic paint retarder
- Tamiya lacquer paint retarder
- Testor's Dullcote
- VMS varnish matt
- AK Ultra Matte varnish
- Pledge floor varnish
- Tamiya LP-24 Semi Gloss Clear
- Mr Hobby H30 Clear Gloss
- GX113 UV Cut Flat clear
- Deluxe Materials Looks Like Glass
- Oil paints- various brands
- Odourless solvent
- Tamiya Weathering Master sets B, C and D
- Mr Weathering Color
- Prismacolor Silver Pencil

### Tools and Materials

- Mr Masking Sol Neo
- Tamiya masking tape, all widths
- Silhouette Portrait 2 cutter
- Oramask 810 adhesive frosted vinyl
- 0.3mm PlusModel lead wire
- SMS ceramic scraper
- Tamiya Fine Craft Saw
- Stitching Awl
- Number 11 Scalpel
- Tamiya files
- Vallejo diamond files
- Round burs
- Abrasive rubber bullet
- Ultimate Modelling Products sanding sticks
- Infini soft sanding sticks
- SMS sanding sticks
- Tamiya polishing compounds
- Fibreglass pen
- Pin vice and drill bits
- Disposable biopsy punch
- Mini craft pegs
- Soft padded clothes pegs
- Artool and Uschi spatter masks
- Sable brushes- various brands and sizes
- Bamboo skewers

### Airbrushes and Compressor

- Sparmax SP-20x 0.2mm airbrush
- Sparmax Max-4 0.4mm airbrush
- Tamiya SX 74802 0.5mm airbrush
- Hseng AS186 Air Compressor



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# GREEN PEARL OF THE SOLOMON ISLANDS

## PART TWO - PAINTING AND WEATHERING







## Josef Blažek paints and weathers his Eduard 1:48 scale Nakajima A6M2-N Rufe floatplane fighter.

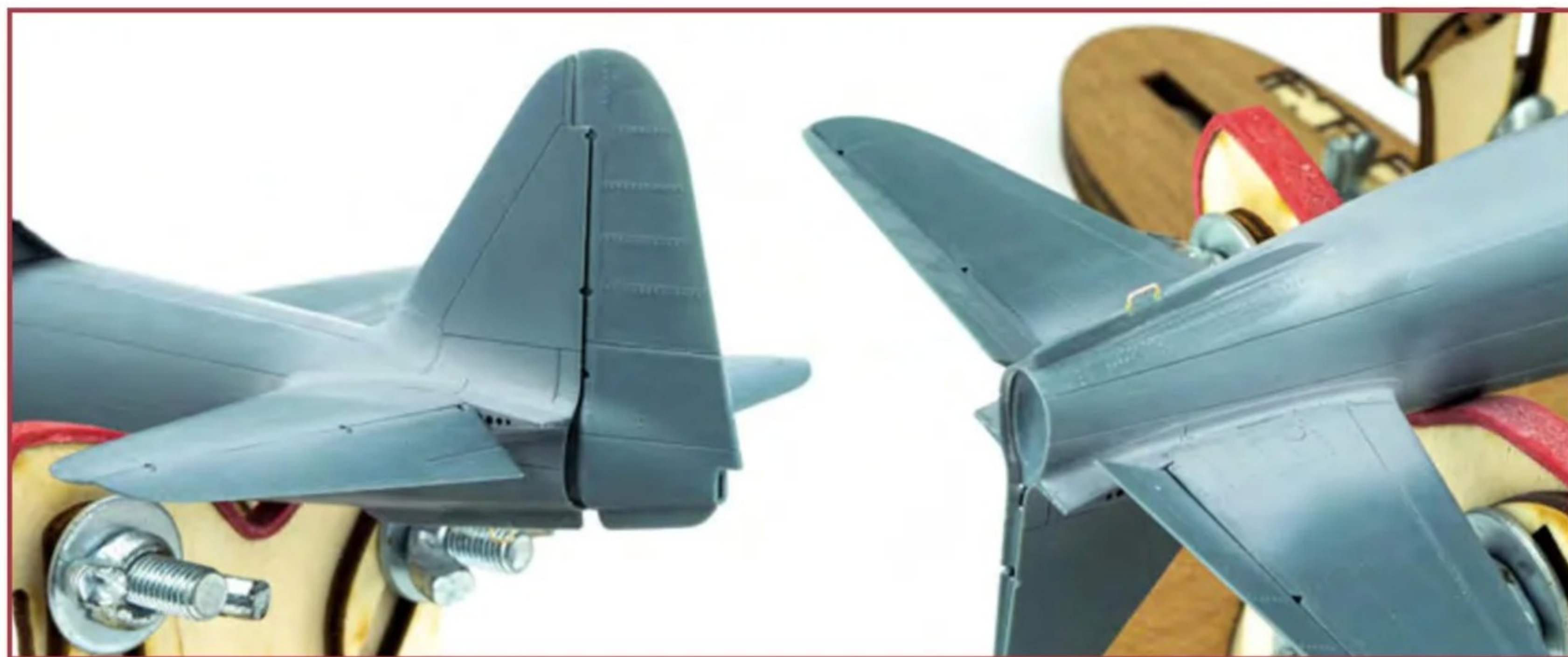
**T**he camouflage of the Nakajima A6M2-N Rufe is based on the same logic as the camouflage of the Mitsubishi A6M2b Model 212. The correct shade when colouring the A6M2-N is the IJNAF J3 SP colour - but in the Nakajima version. It is slightly more saturated in its shade compared to the IJNAF J3 SP from Mitsubishi. The control surfaces (except for the trims) were painted in a different colour - IJNAF J3 Hai-iro (similar to Mitsubishi). When painting the model, I wanted to follow the same logic as on the original, so I processed the entire model in its original colour IJNAF J3 SP+IJNAF J3 Hai-iro and then applied dark green. I used Gunze C 336 Hemp as the basis of the camouflage, which I did not modify, as its shade corresponds well to A6M2-Ns produced by Nakajima. I applied the IJNAF J3 SP shade over the entire surface of the model to create a uniform quality layer of paint with the desired shade as a base for the next steps. I then lightened the shade of IJNAF J3 SP and focused on creating irregular spots with the lightened shade with a preference for the centres of individual panels. In the next step, I again chose the base shade IJNAF J3 SP, which I diluted more with Mr. Retarder Mild and instead focused on panel edges and rivet lines. The control surfaces were coloured with the shade IJNAF J3 Hai-iro, which I mixed from Gunze C 35 with the addition of Gunze C 336 Hemp. After masking, I sprayed the control surfaces with IJNAF J3 Hai-iro shade (except the trims). As I already mentioned, the camouflage of the machine I chose was specific in its own way. For the green paint applied in field conditions I chose Gunze C15 IJN Green

(Nakajima) and focused first on the edges of the camouflage fields, which themselves present a challenge as their transitions are supposed to bear traces of irregular paint application. After a lot of testing, I got the most convincing results by spraying the transitions over 3M (Scotch Brite) sanding cloth.

In this way, I achieved a believable interpretation of colour transitions when applied in field conditions. I used a darker shade of Gunze C15 when spraying the colour gradients to get a believable contrast between the gradients and the colour not too bright (which it would be in its thin layer). In the next step, I applied a base coat on the upper surfaces of the model, which I then lightened to create irregular spots that would faithfully ➤



◀ simulate the uneven result of applying paint in field conditions. It is important to create the effect of the background colour of the original colouring showing through in places, which required several thin layers of variously modified colours. After completing the camouflage, I proceeded to mask the orange-yellow leading edges on the main wing. Here I used Gunze C58 Orange Yellow which correctly interprets this specific shade and cannot be confused with any other yellow shade. The next step was the spraying of Japanese Hinomaru symbols for which I cut my own masks from kabuki tape. I first started with the white edge of the Hinomaru at the fuselage and moved to the red where I chose C81 Russet as the base shade for good coverage. Next, I modified the resulting appearance of the worn surface using Gunze C 385 Japanese Navy Marking paint (and its modifications), then masked the red stripe on the tail, which was noticeably darker on the original, which perfectly reflects the mix of shades of Gunze C81 Russet with a small addition of red C 385 Japanese Navy Marking. All that remained was to spray the “no step” zones on the main wing. The field adjustment of the camouflage meant that most of the labels, which should be invisible on the resulting model, were painted over. Exceptions are uncoated parts and prominent translucent elements. A typical example are red “no step” zones. After masking them, I was very careful and applied only a small amount of diluted paint to achieve a see-through effect on the green shade. On the contrary, I chose a stronger spray on an uncoated surface, where the “no step” zones remained clear on the original IJNAF J3 SP colour. After unmasking, I sprayed the entire model with GX-100 Mr. Color Super Clear III gloss varnish as a base for the decals. ➤

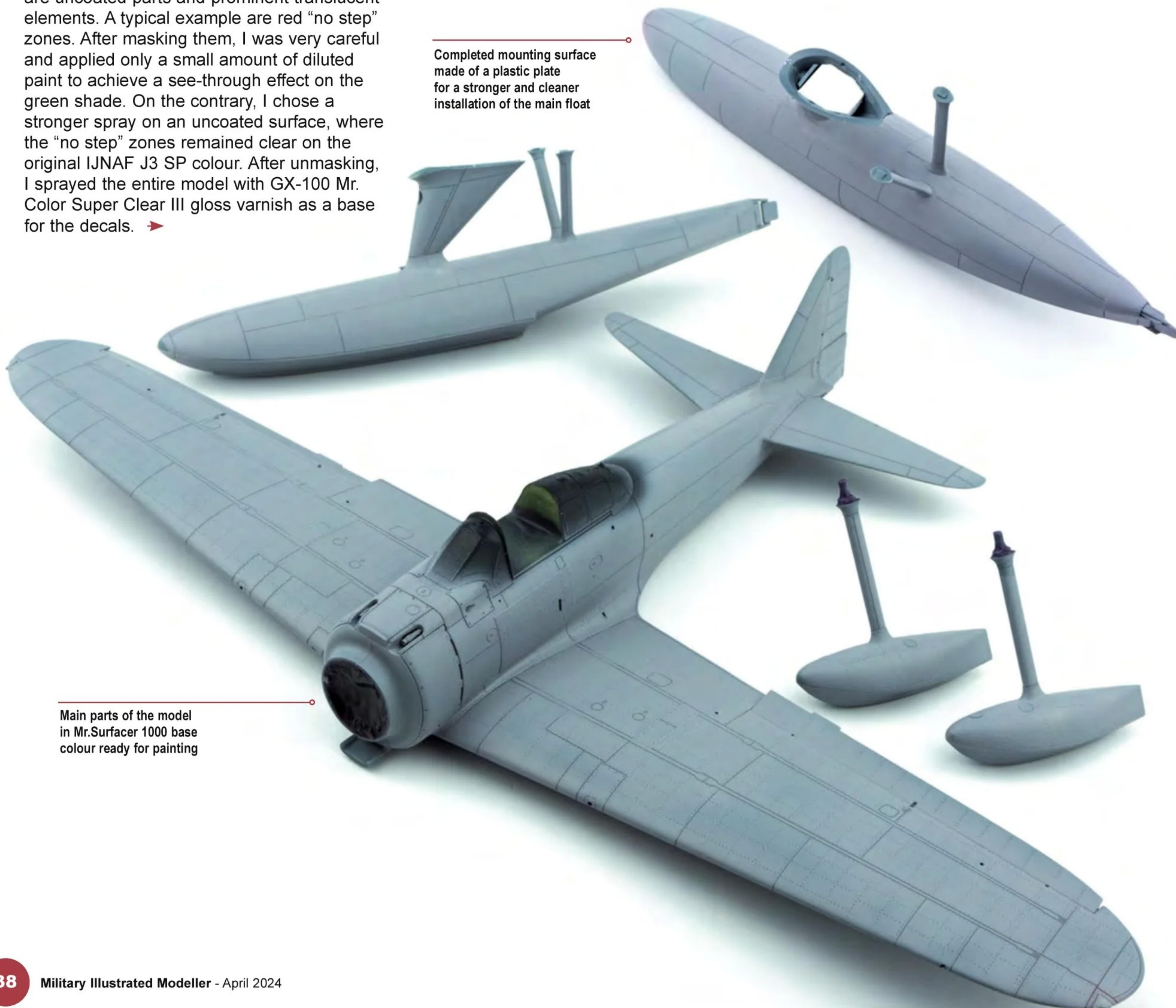


Corrected shape of the lower part of the rudder. I replaced the plastic anchor point in the tail part with wire



I sprayed the position lights for the top of the main wing with Tamiya transparent paints

Completed mounting surface made of a plastic plate for a stronger and cleaner installation of the main float



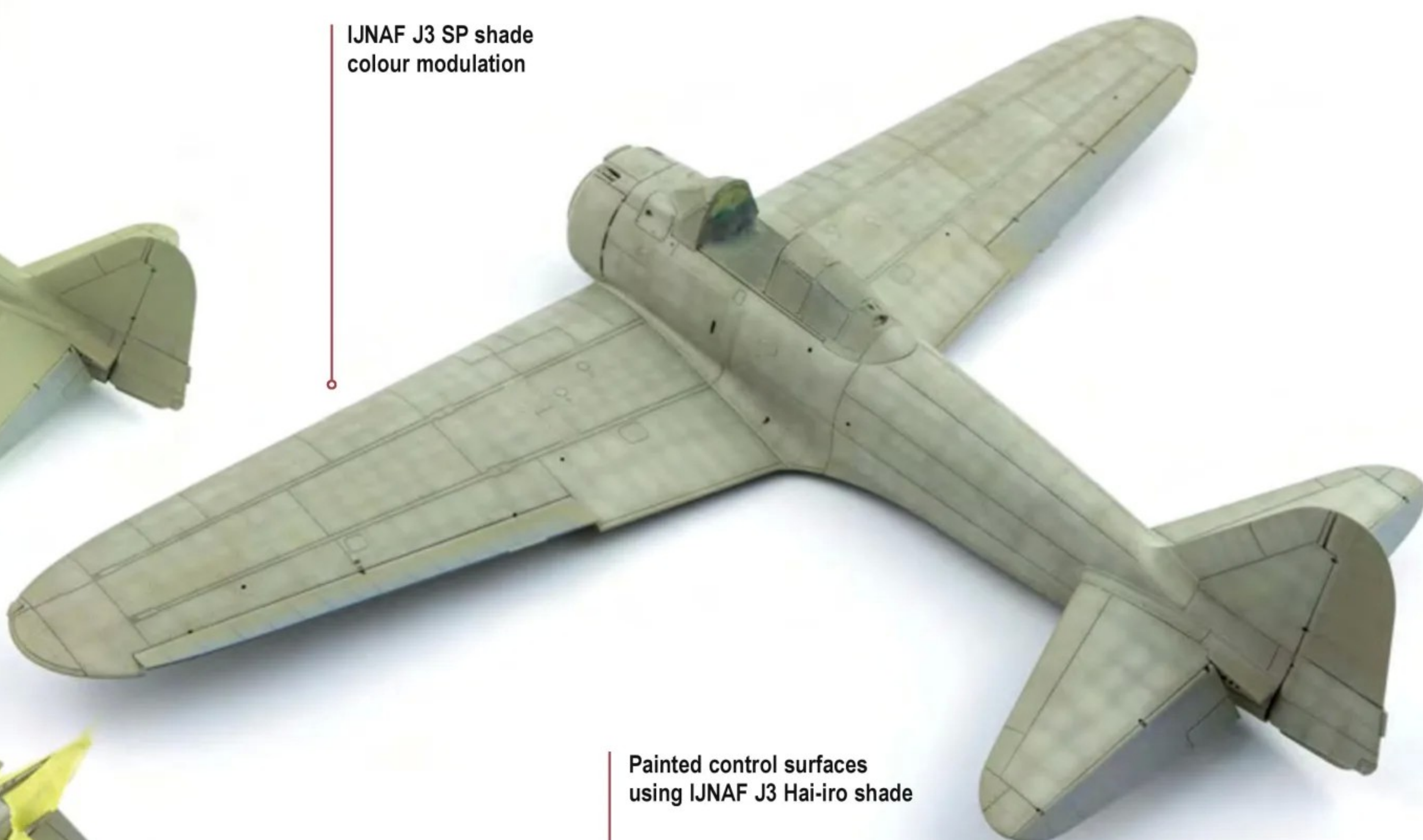
Main parts of the model in Mr. Surfacer 1000 base colour ready for painting



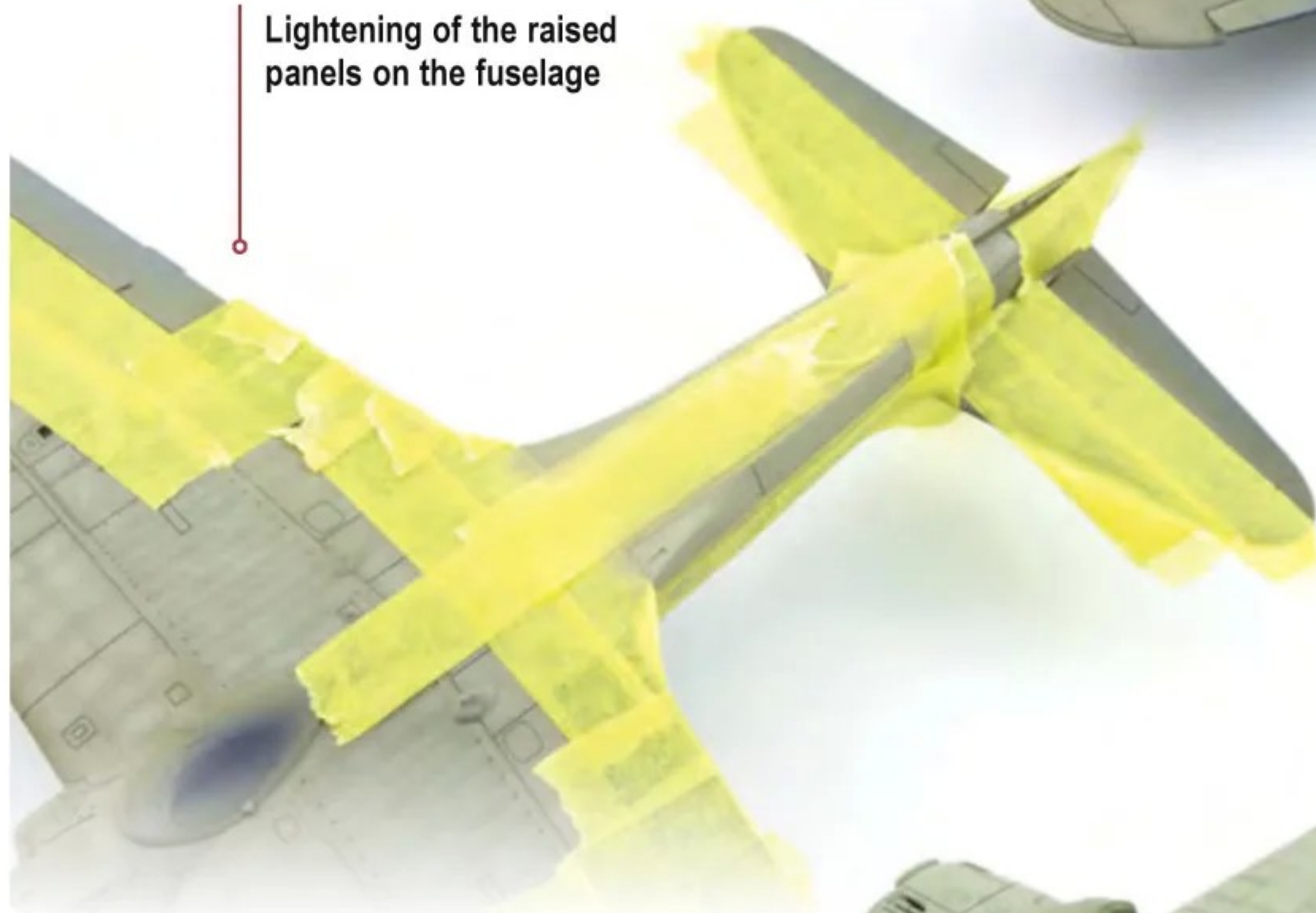
Basic coating with shade IJNAF J3 SP



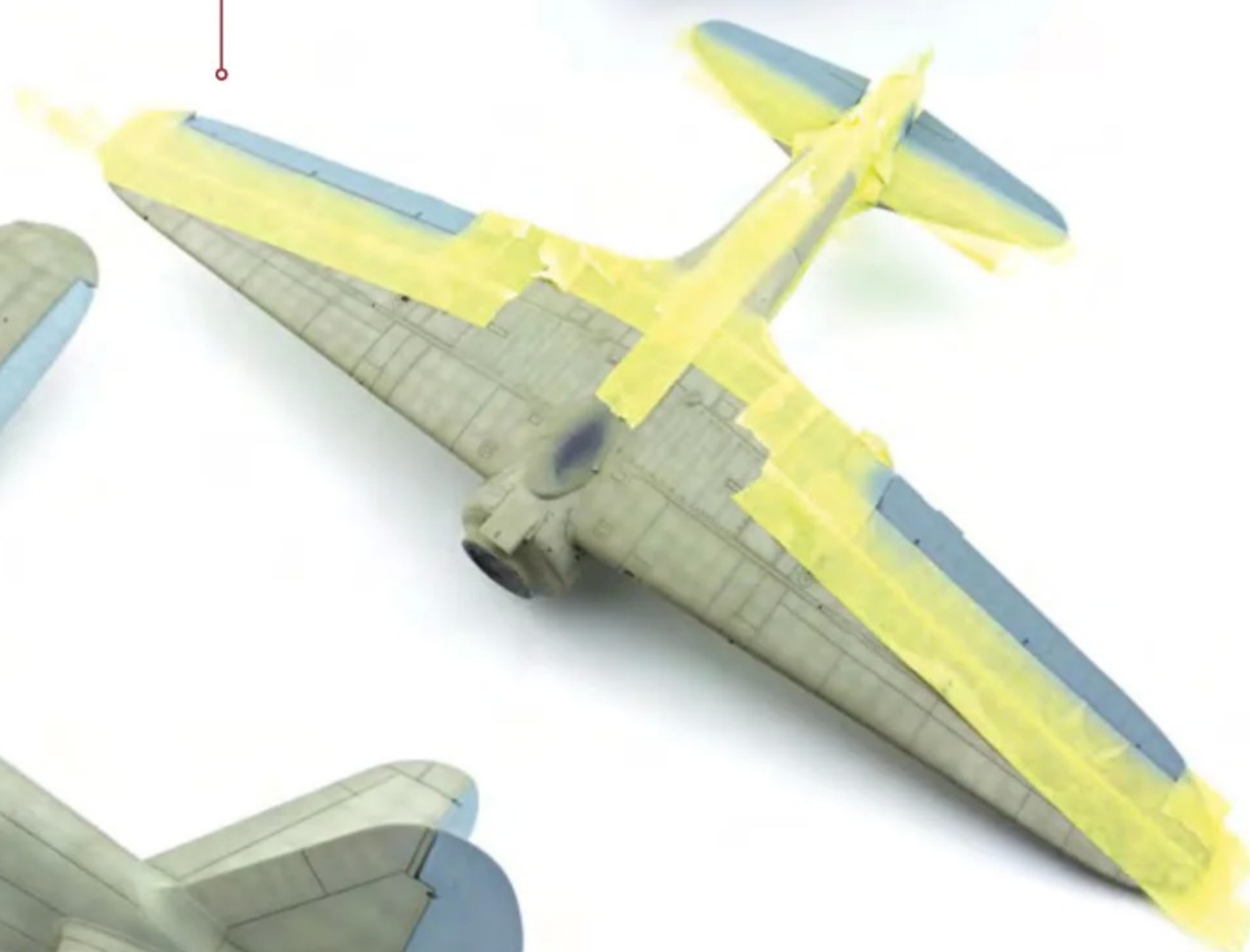
IJNAF J3 SP shade colour modulation



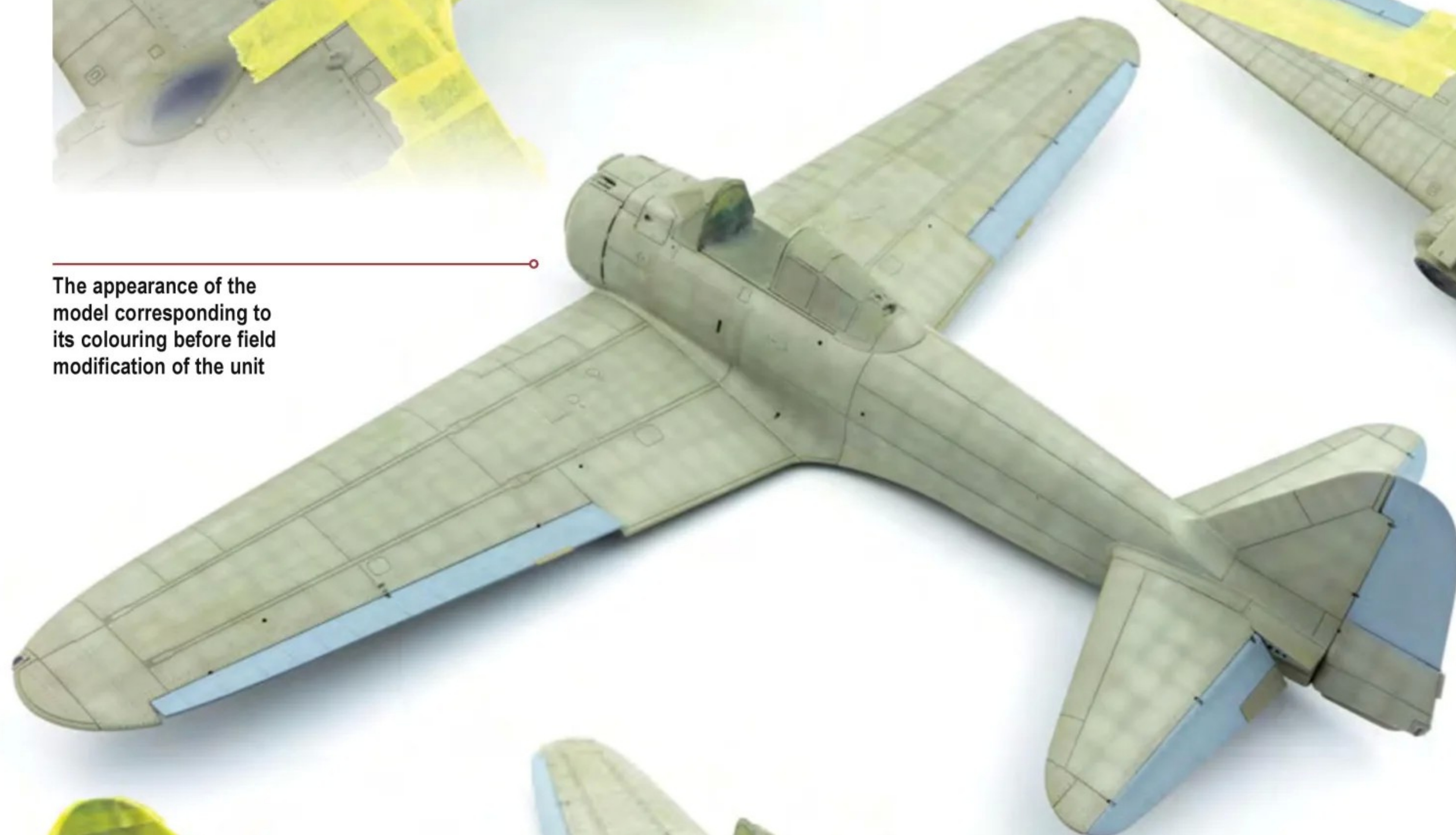
Lightening of the raised panels on the fuselage



Painted control surfaces using IJNAF J3 Hai-iro shade



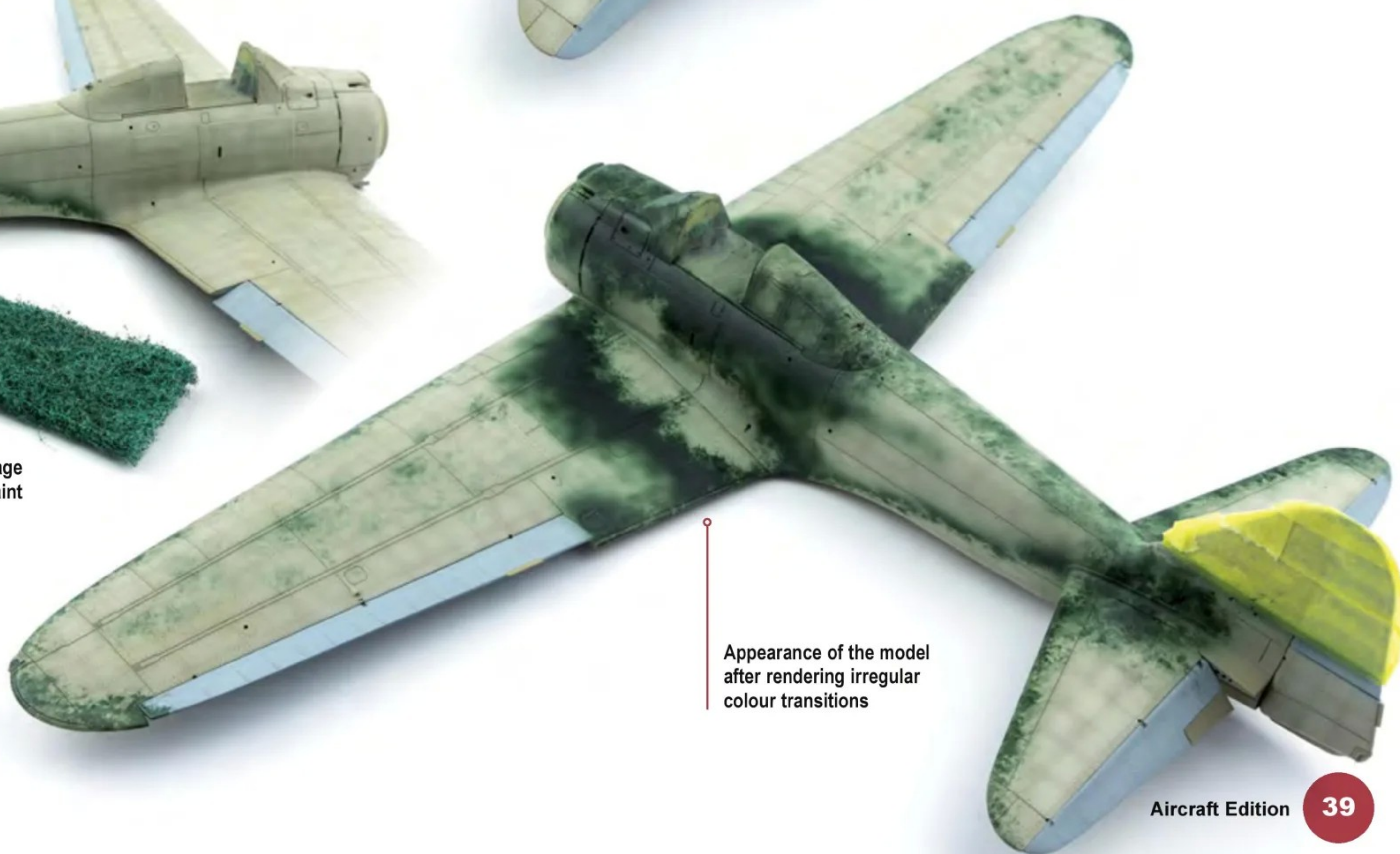
The appearance of the model corresponding to its colouring before field modification of the unit



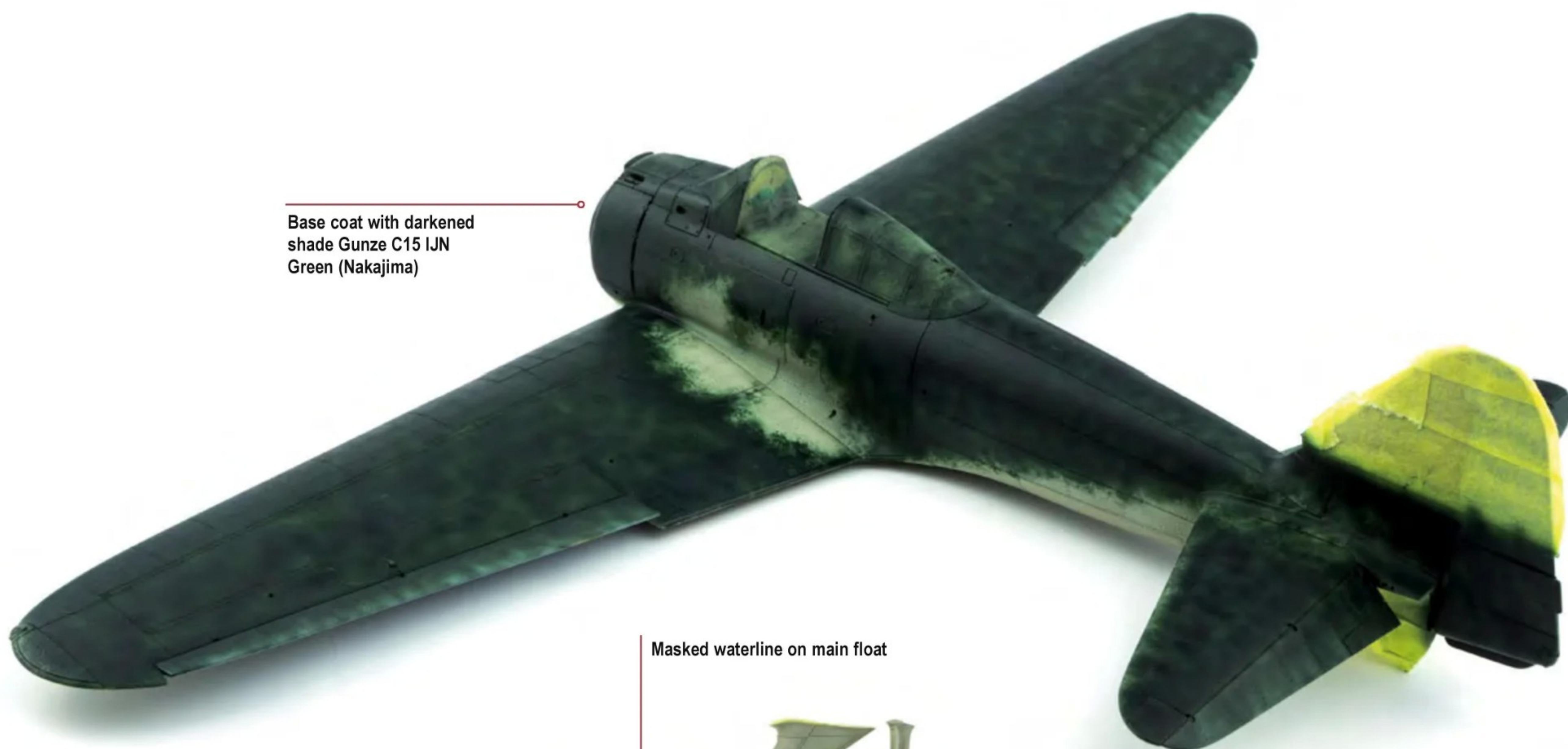
Colour transitions on the fuselage simulating the application of paint in field conditions



Appearance of the model after rendering irregular colour transitions





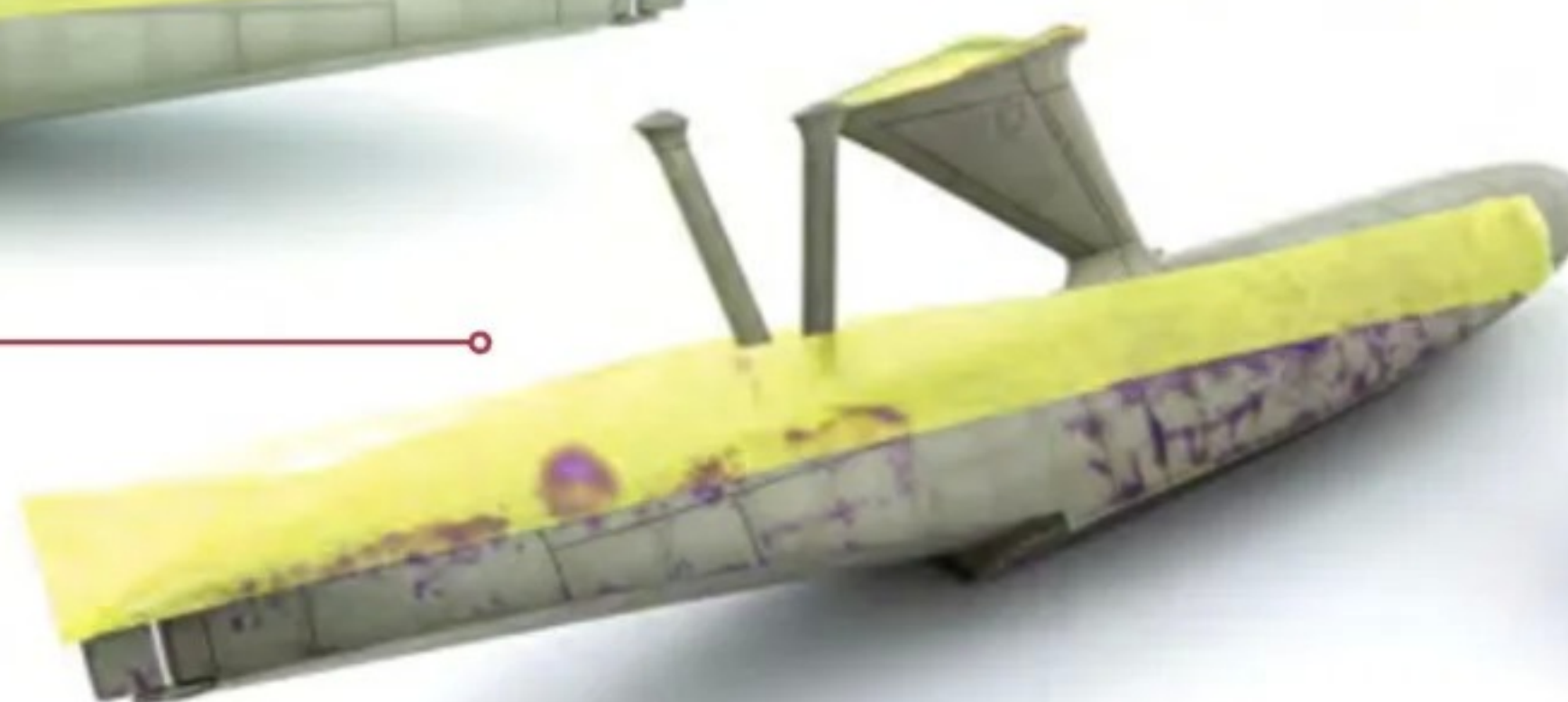


Base coat with darkened shade Gunze C15 IJN Green (Nakajima)

Masked waterline on main float



Applying the mask from Maskol before applying the Gunze C15 IJN Green (Nakajima) paint, the aim is to simulate paint damage related to the influence of sea water.



Main float ready for further painting



I proceeded in the same way on all the floats



As with the fuselage and wings, the first step was to spray Gunze C15 IJN Green (Nakajima) darkened shade



Subsequent lightening and modulation of the base shade Gunze C15 IJN Green (Nakajima)



◀ Since I sprayed most of the markings on the model, I only used some visible labels and code markings in the tail part from the decal sheet. The application of decals from the Eduard kit is problem-free, and in addition, they stand out with the well-known possibility of removing the protecting film. After applying the decals, I finished painting the inner parts of the structure in Nakajima silver base colour, like the inner structure of the fuselage (visible around control surfaces). The surface of the A6M2-N Rufe was visibly worn and showed peeling paint. Here, however, it is necessary to emphasize the bad interpretation of many A6M2-N builds. Nakajima's green paint was peeling, especially when poorly applied in field conditions. At the same time, after it was damaged, the paint peeled off on the underlying IJNAF J3 SP. In places with high load and friction (the bottoms of the floats or the front of the floats and the boarding area under the cabin) we can observe abrasions on the primer dark red colour. It was very substantial in its design and thus protected the aircraft very well from scratches on the metal, which many modelers like to and pointlessly depict. The Japanese were aware of the rapid corrosion of the materials used and treated the surface and internal structure very well. The different character of the wear in the area of the floats and the hull is clearly visible in the period shots. The salt water was taking its toll, and the abrasions on the floats were different in character from those on the fuselage and wings. After testing, I decided to use two techniques for applying abrasions. I recommend avoiding chipping and similar methods. For the areas of the floats, I masked the abrasions with Maskol, the whole process was perfectly controllable with this technique and matched the nature of the larger abrasions caused by movement, friction, and the action of salt water. At the same time, the paint tended to peel off at the level of the dip of the floats and copy it. Rufe was tilted on the water's surface, which the curve of the peeling paint must reflect. Here it is important that the whole painting must be accurate with the same ➤





Camouflaged model ready to spray orange-yellow leading edges

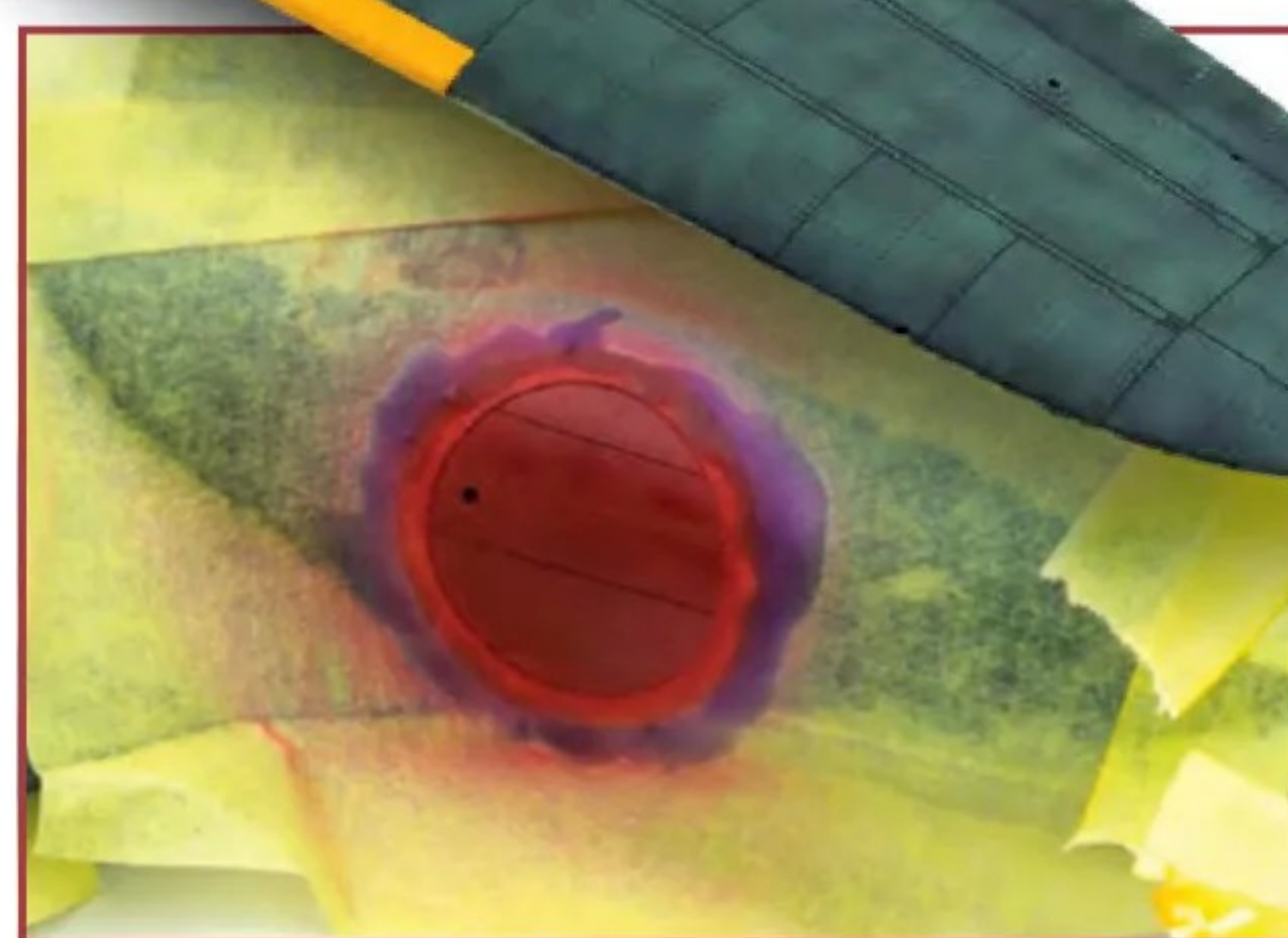
Finished paintwork



Applied masks for Hinomaru



The first step was the white edges of the Hinomaru



This was followed by a base coat of C81 Russet



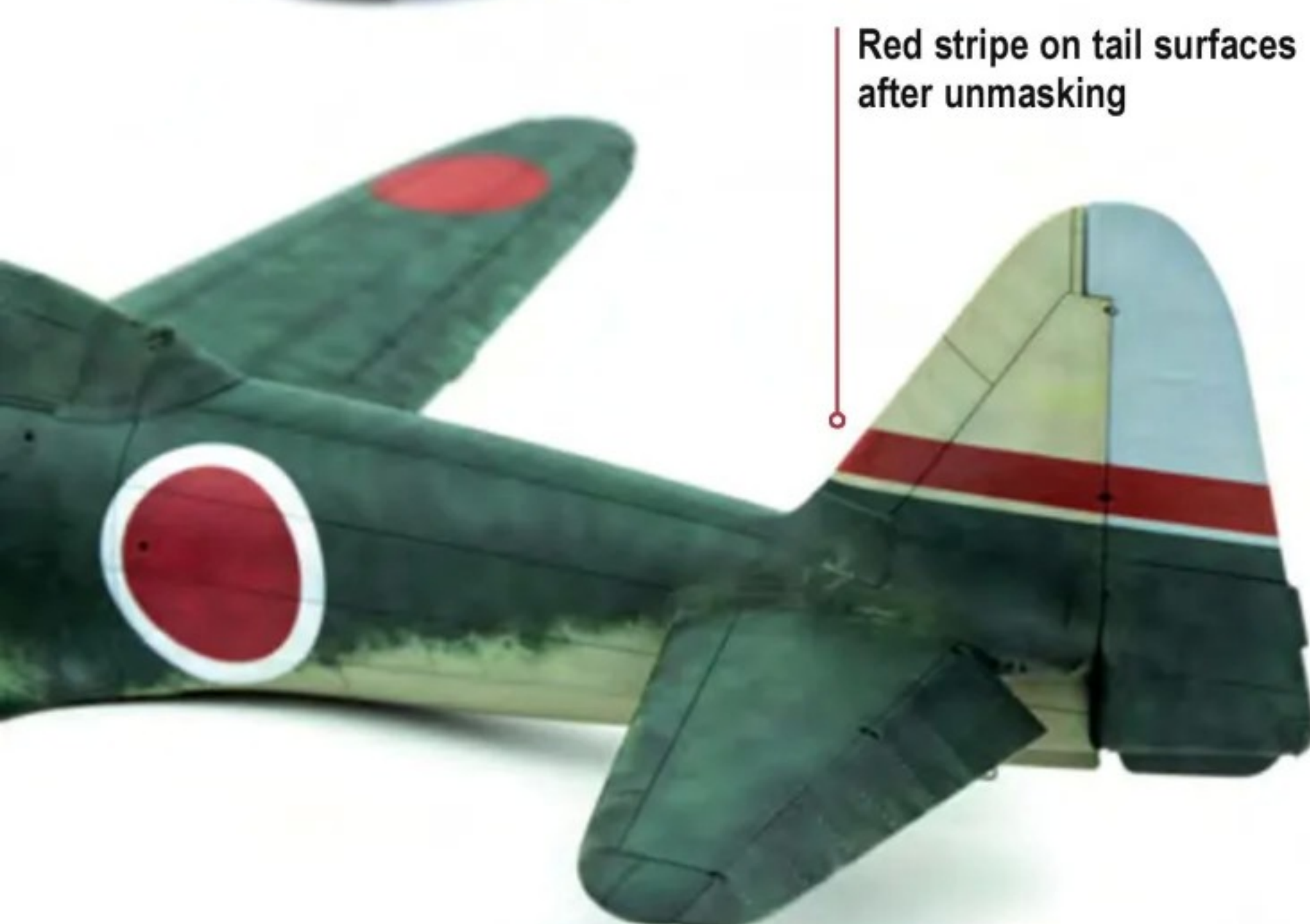
Hinomaru colour modulation



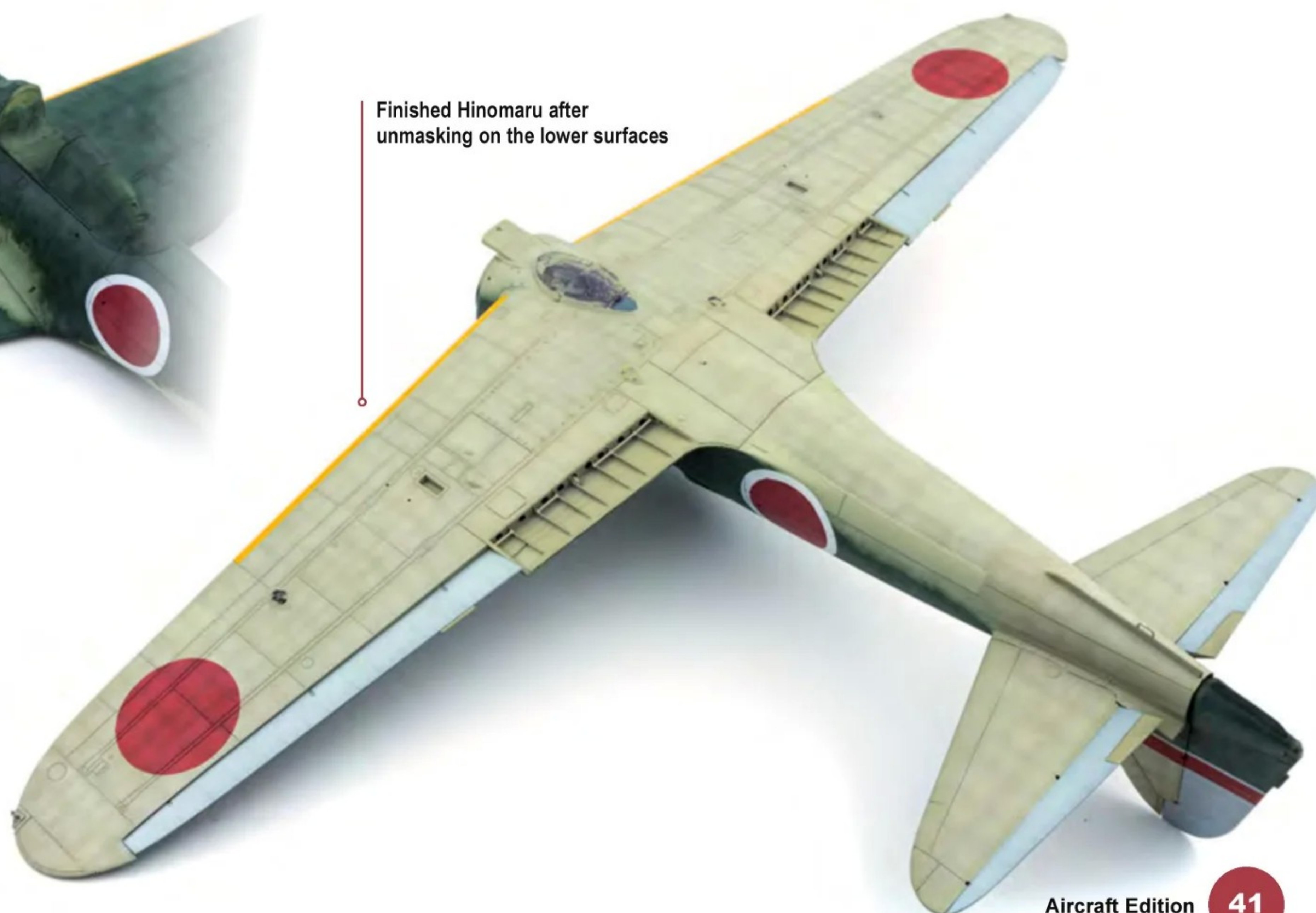
Colour modulation of Hinomaru in the final stage



Finished Hinomaru after unmasking upper surface.



Red stripe on tail surfaces after unmasking

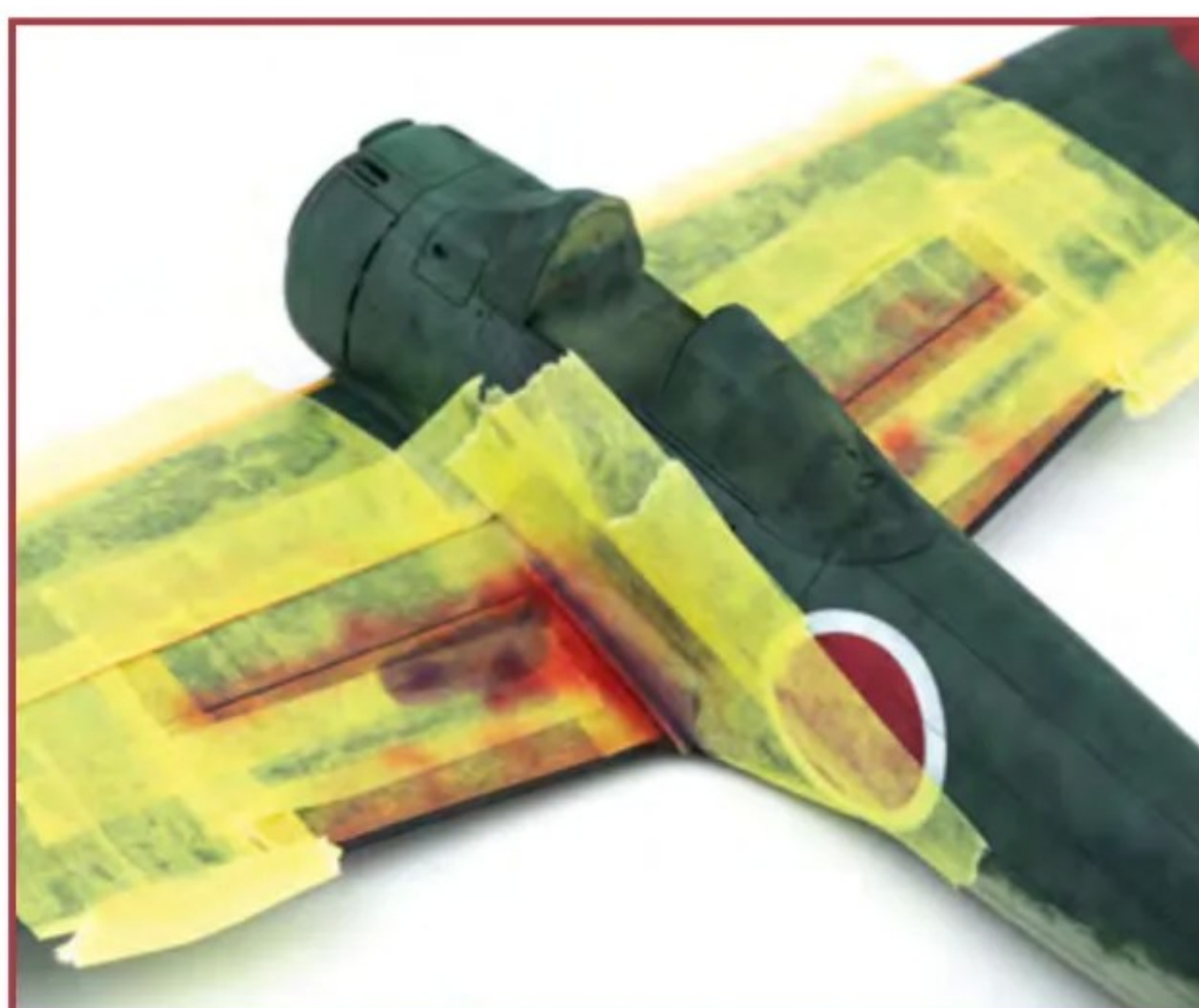


Finished Hinomaru after unmasking on the lower surfaces





Masked "no step" zones on the main wing

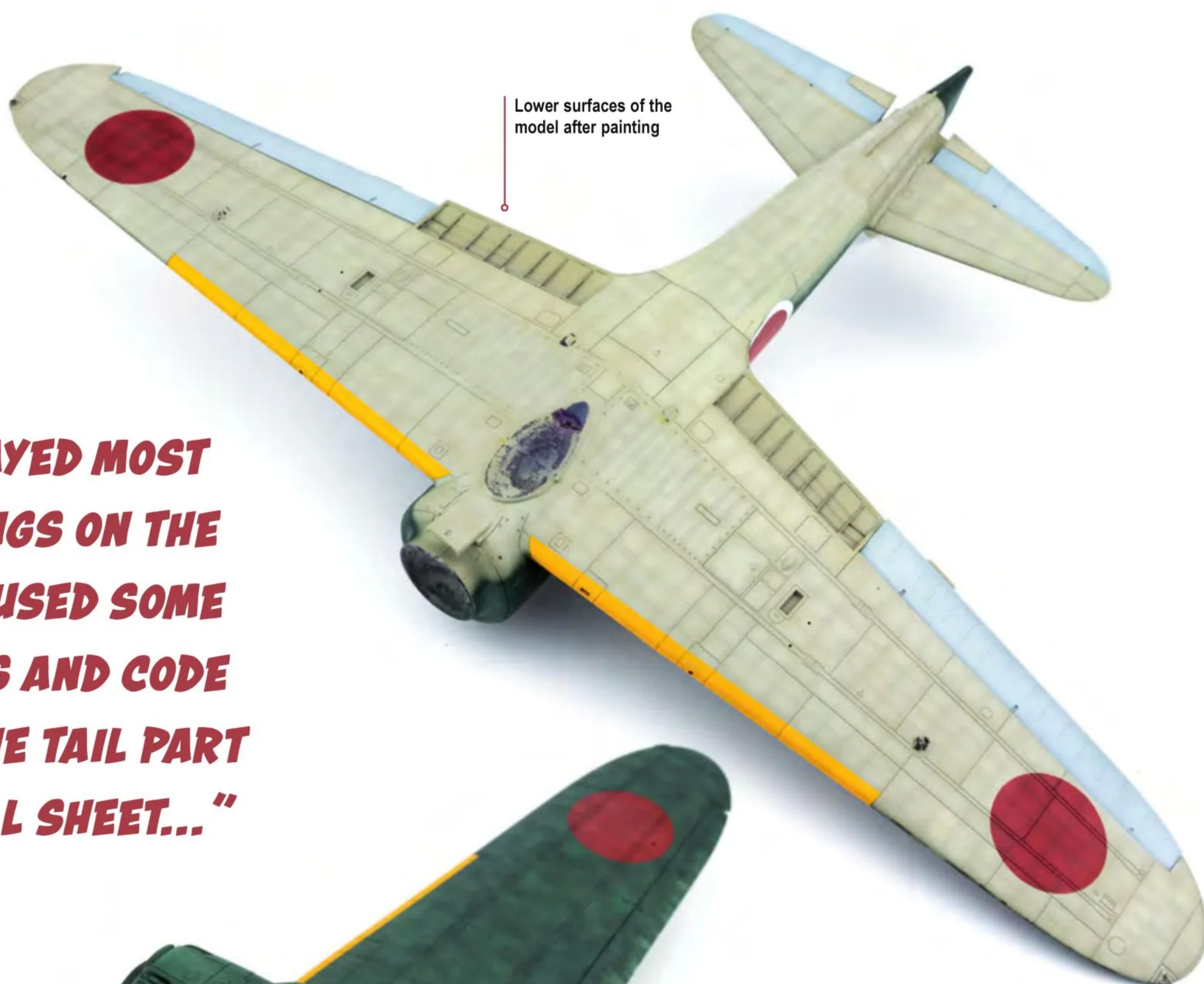


Decent spraying to simulate an overlay



The resulting effect gives the impression of see-through "no step" zones under the green colour

***"SINCE I SPRAYED MOST OF THE MARKINGS ON THE MODEL, I ONLY USED SOME VISIBLE LABELS AND CODE MARKINGS IN THE TAIL PART FROM THE DECAL SHEET..."***



Lower surfaces of the model after painting



Painted model ready to work with oils



◀ angle for all three floats. Abrasions occurred on the upper surfaces I proceeded by hand painting with Vallejo paints from which I mixed the corresponding shade of IJNAF J3 SP. The whole process is time-consuming and requires the necessary practice and feeling to create a realistic look without too much regularity. Subsequently, I was able to start working with oil paints. I mixed my own mix of Abteilung 502 oil paints, which after thinning I applied to the model, allowed to set and wiped off. The oil paints stuck well to the surface details of the model and highlighted them beautifully. After finishing the basic patina, I varnished the model with Gunze GX 112 UV Cut matte varnish.

## ENGINE

The plastic engine in the kit is very nice and more than adequate. If we want more fine details, we can reach for an alternative, which is Nakajima Sakae 12 engine from direct 3D printing. The only thing that can be criticized about the accessory is the etched ring with cables, which is too rough and flat. I recommend using the plastic ring, which is intended for the engine from the kit, and supplementing the wiring and other details from lead and copper wires. The colouring itself is then easy due to the pattern and unfortunately not very attractive for the black colour of the engine cylinders. For painting the engine, I used Vallejo paints, with which the whole process is controllable, easy and resists the subsequent use of modelling chemicals. Assembling the engine cover is typically an easy part because of the assembly tool for the kit. In addition, I had easy-to-apply direct 3D printed exhausts that fit perfectly into place. ➤



The landing flaps were in silver colour

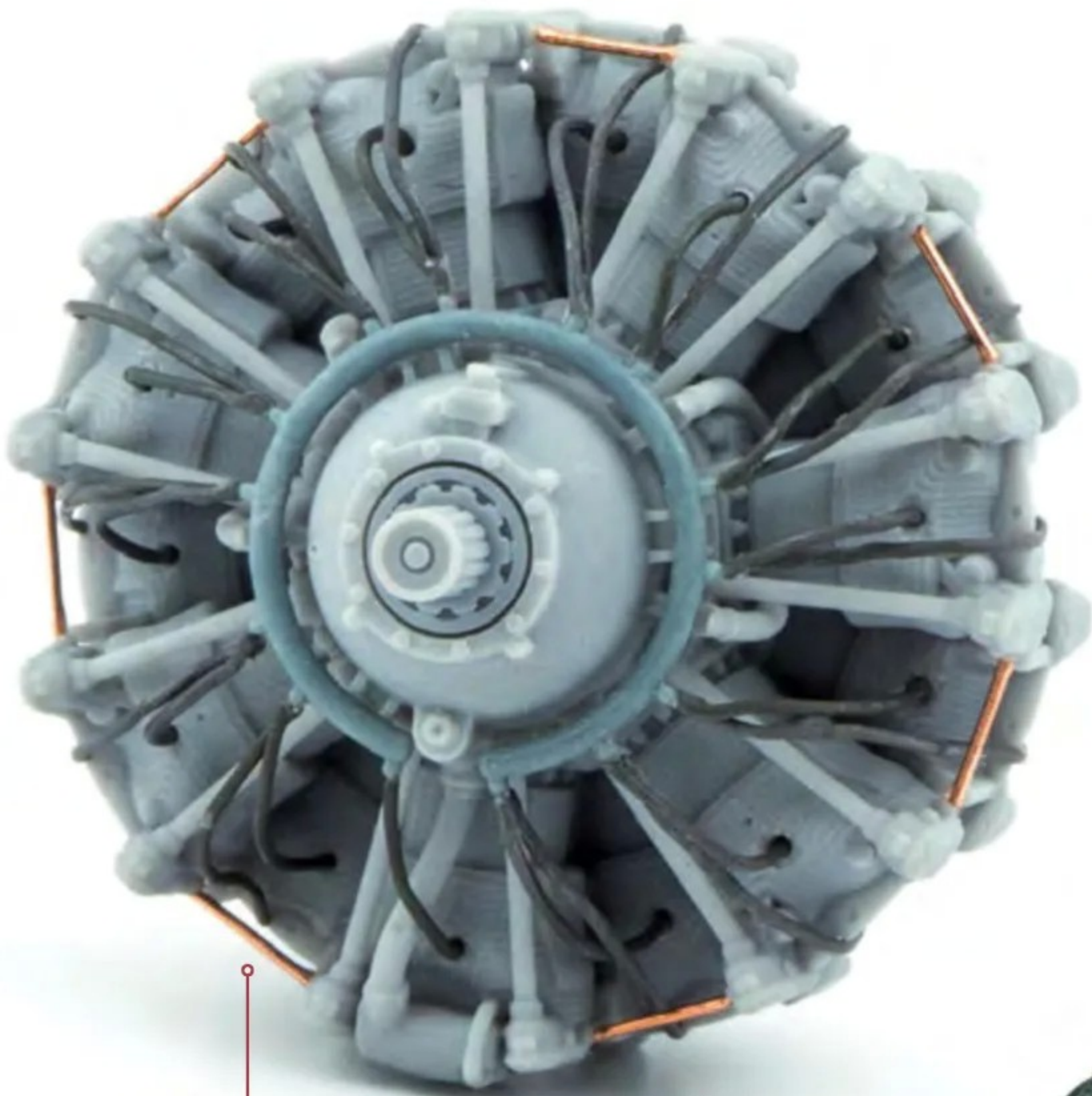


IJNAF J3 SP paint scratches painted with a brush using Vallejo paints



Application of oil paints mixture





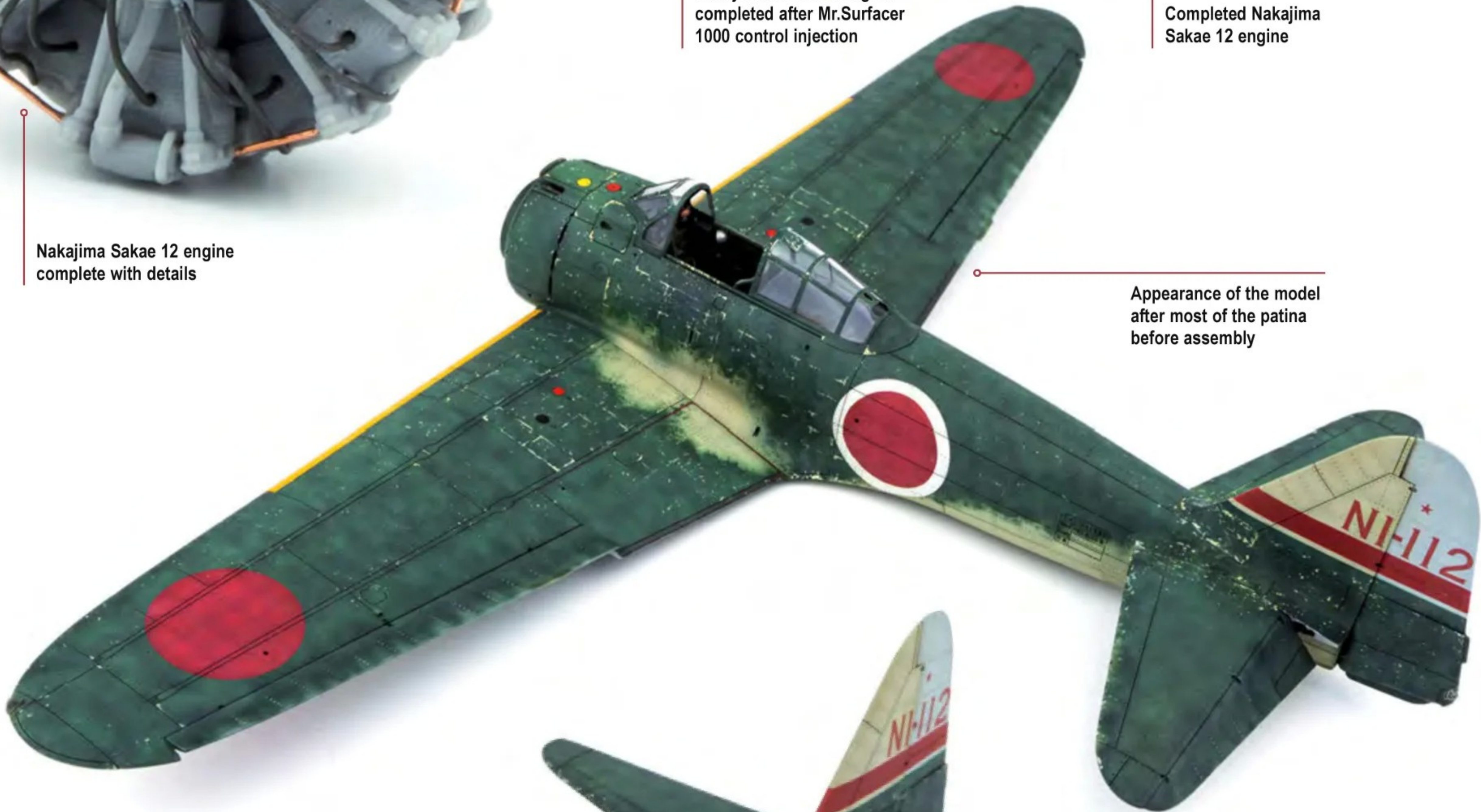
Nakajima Sakae 12 engine complete with details



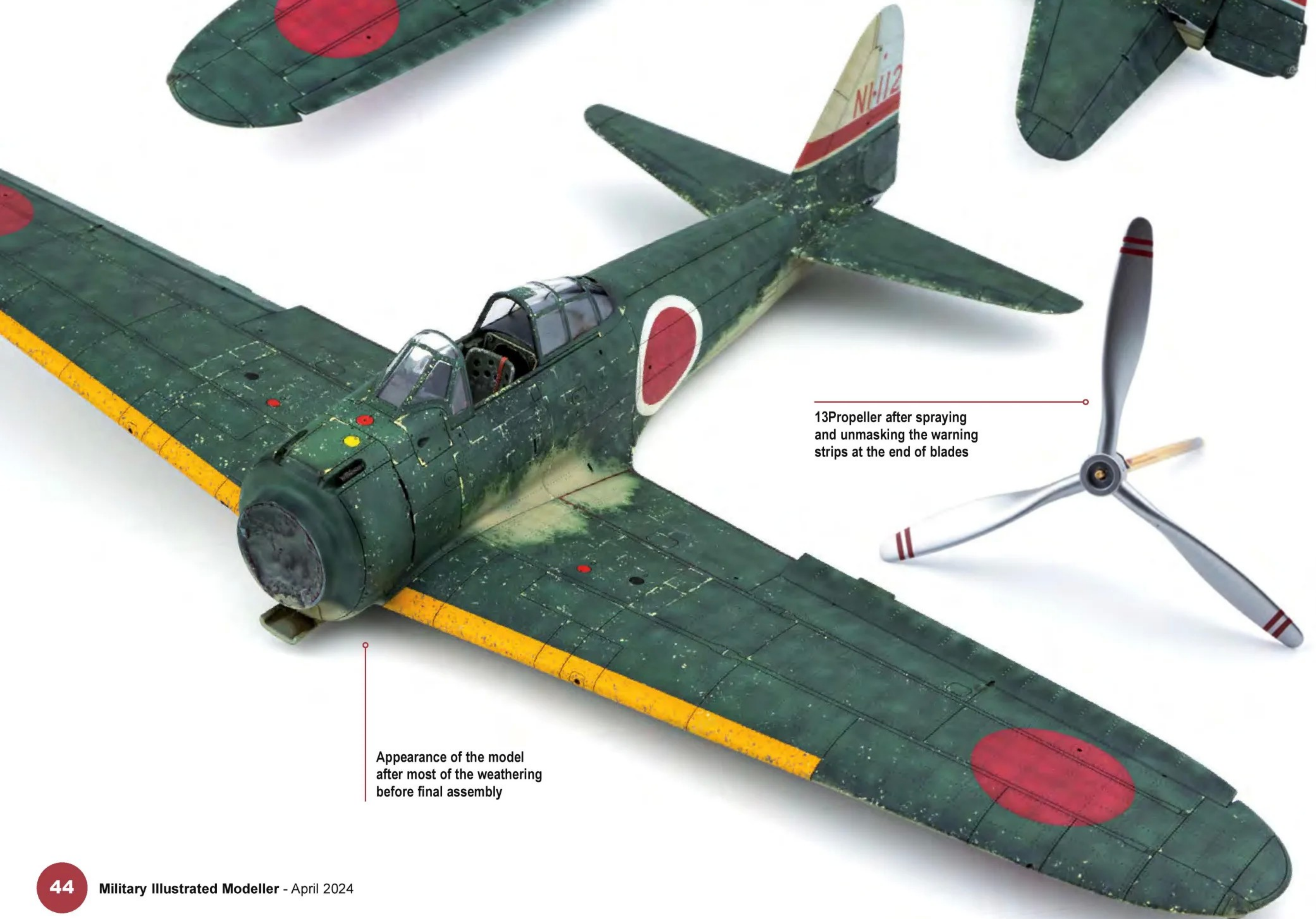
Nakajima Sakae 12 engine completed after Mr.Surfacer 1000 control injection



Completed Nakajima Sakae 12 engine



Appearance of the model after most of the patina before assembly



Appearance of the model after most of the weathering before final assembly

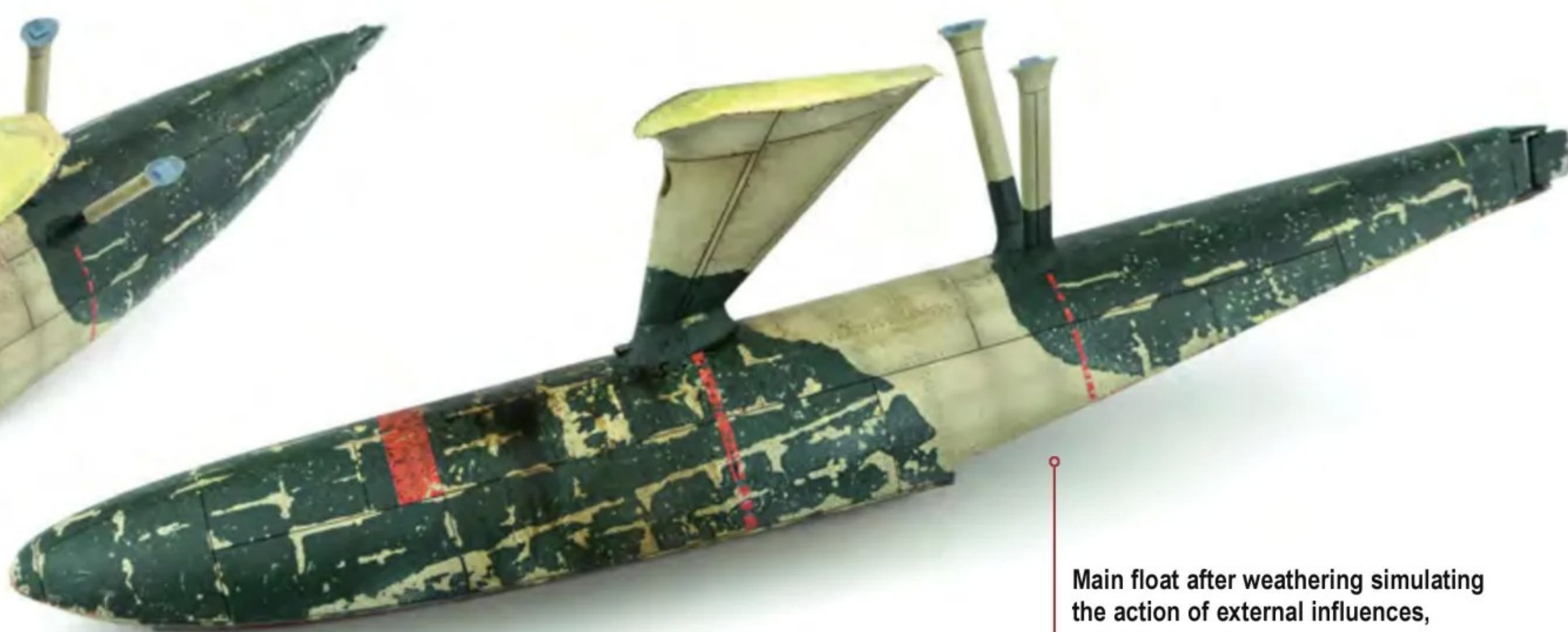


13Propeller after spraying and unmasking the warning strips at the end of blades





Patinated main float ready to assembly to the rest of the model. The float has signs of the maintenance of the Nakajima Sakae 12 engine, which was placed directly above it.



Main float after weathering simulating the action of external influences, personnel and sea water



The bottom of the float faced heavy handling friction and bore traces of IJNAF J3 SP paint rubbing down to the base dark red paint.



Main float after patina simulating the action of external influences, personnel and sea water

◀ The engine cover is missing some rows of rivets, which I added with a needle and riveter according to the references. In the case of a worn Rufe, this is appropriate, as the engine cover was not protected in the same way as the fuselage or floats and showed a lot of scratches and scuffs on the metal. The colour of the engine cover was the familiar IJNAF Q1, which itself is very dark, so a very dark to black wash is suitable to highlight the panel lines. Subsequently, I added Vallejo aluminium paint with a brush to many scratches and damage to the paint according to the references. The propeller is very nice in the kit. However, I slightly improved the details. It is more model-friendly to mask and spray the warning strips at the end of the propeller blades. During the colouring itself, it is advisable to underline the difference between the metal surfaces on the propeller blades and on the cone. The propeller blades were polished metal, but the aluminium cone showed visible signs of wear. A special anti-glare paint must then be applied to the reverse side of the propeller blades. ➤

Typical traces of engine oil from the Nakajima Sakae 12





Added rivets on the engine cover

Weathered propeller cone

Engine cover after patina ready to install on the model

Japanese naval 60 kg bombs

Finished propeller after assembly ready to install on the model

Finished trolley

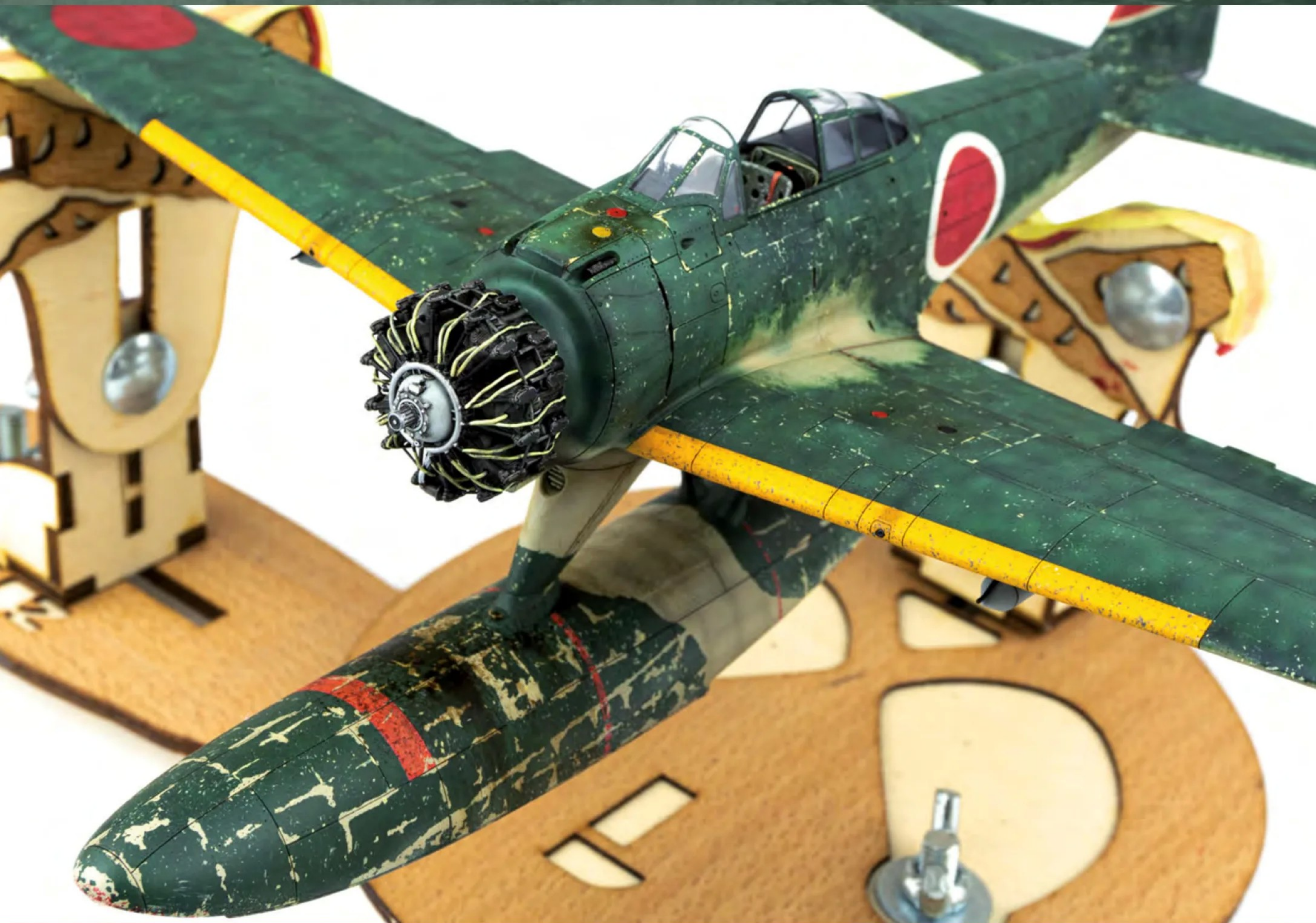
## TROLLEY

An integral part of the A6M2-N for movement on the ground is the trolley, which is included in the kit. Here, the manufacturer demonstrated a high sense of detail and took the design and the pursuit of authenticity further than the competition. The cart is easy to assemble and contains many positive rivets. It contains only small depressions on the inner sides, which should be filled. After assembling the cart, I followed the analysis of the materials that the manufacturer published on their website during painting - i.e., a mix of metal construction, wood and tires. I then painted the entire cart with hairspray and sprayed it with Gunze C13 Grey. I recreated the operational wear by peeling off the grey paint using a sharpened dry toothpick. The base hairspray forms an unstable base, so peeling is easy. I added fine scratches and other details using Vallejo paints according to the references and proceeded to work with oils using my own mix just like on the A6M2-N. I provided the finished trolley with a protective matt varnish Gunze GX 112 UV Cut.

## FINAL WEATHERING AND COMPLETION

After completing the main units and sub-assemblies, it was necessary to assemble everything together and add the weathering, which was not possible on the model under construction, or was suitable to be added at the end of the construction for the balance. The first typical feature of the A6M is the oil stains from the Nakajima Sakae 12 engine. Additional fuel and oil leaks from regular maintenance are documented on the main float directly below the engine. Another typical area is the area around the lids of the tanks and the local soiling of these areas. I proceeded very gently with Tamiya LP-67 Smoke with admixture of other colours to achieve a faithful effect of traces of exhaust fumes. The last paint steps were to add some fine scratches under cockpit using a brush and Vallejo paints again. At the end of the construction, all that remained was to make the hand holds and foot holds on the fuselage, add the antenna, adjust the control surface rods for their deviated position, paint and glue the position lights on the top of the wing, add the pitot tube, the cabin cover with details, glue the landing flaps and the model was done! ➔





Installing a direct 3D printed engine is easy, accurate and fast



Additional hand holds and foot holds on the fuselage made of profiles



Additional scratches on the primer colour



## ◀ CONCLUSION

The Nakajima A6M2-N Rufe from Eduard is a positive new product in every way. The model is faithful in relation to the original and reflects the details and specifics of the type that have been overlooked so far in all competing models. In its basic version, the model is rich in detail and at the same time allows for many improvements at the cost of minimal extra work. The only shortcoming, I noticed during the assembly of the model was the completion of the additional landing flaps, the design solution of which is inappropriate. In general, it can be said that this is at least the best floatplane model, both in terms of detail and build quality, in Japanese colours. Want to build a seaplane? Then the Rufe from Eduard will be a good choice.

***Vive la difference! •***

## MODELSPEC

Eduard 1:48 RUFE DUAL COMBO. Kit No. 11171

### Accessories Used:

- Eduard item No. 481109 - A6M2-N Rufe landing flaps (PE-Set)
- Eduard item No. 648850 - A6M2-N Rufe cockpit PRINT (Brassin)
- Eduard item No. 648852 - A6M2-N Rufe engine complete Print

### Tools and Materials Used:

- Evergreen plastic profiles
- Gunze Mr. Cement S
- Gunze Mr. Cement Deluxe
- Tamiya Extra Thin Liquid Cement
- Gunze Mr. Surfacer 1000
- JLC Razor Saw
- Sanding Sticks
- Gunze Mr. Masking Tape (6 mm, 10 mm, 18 mm)
- Plastic Clamps (various sizes)
- Iwata High Performance HP-CH Plus Special (0,2mm) Airbrush

### Paints and Finishing Products Used:

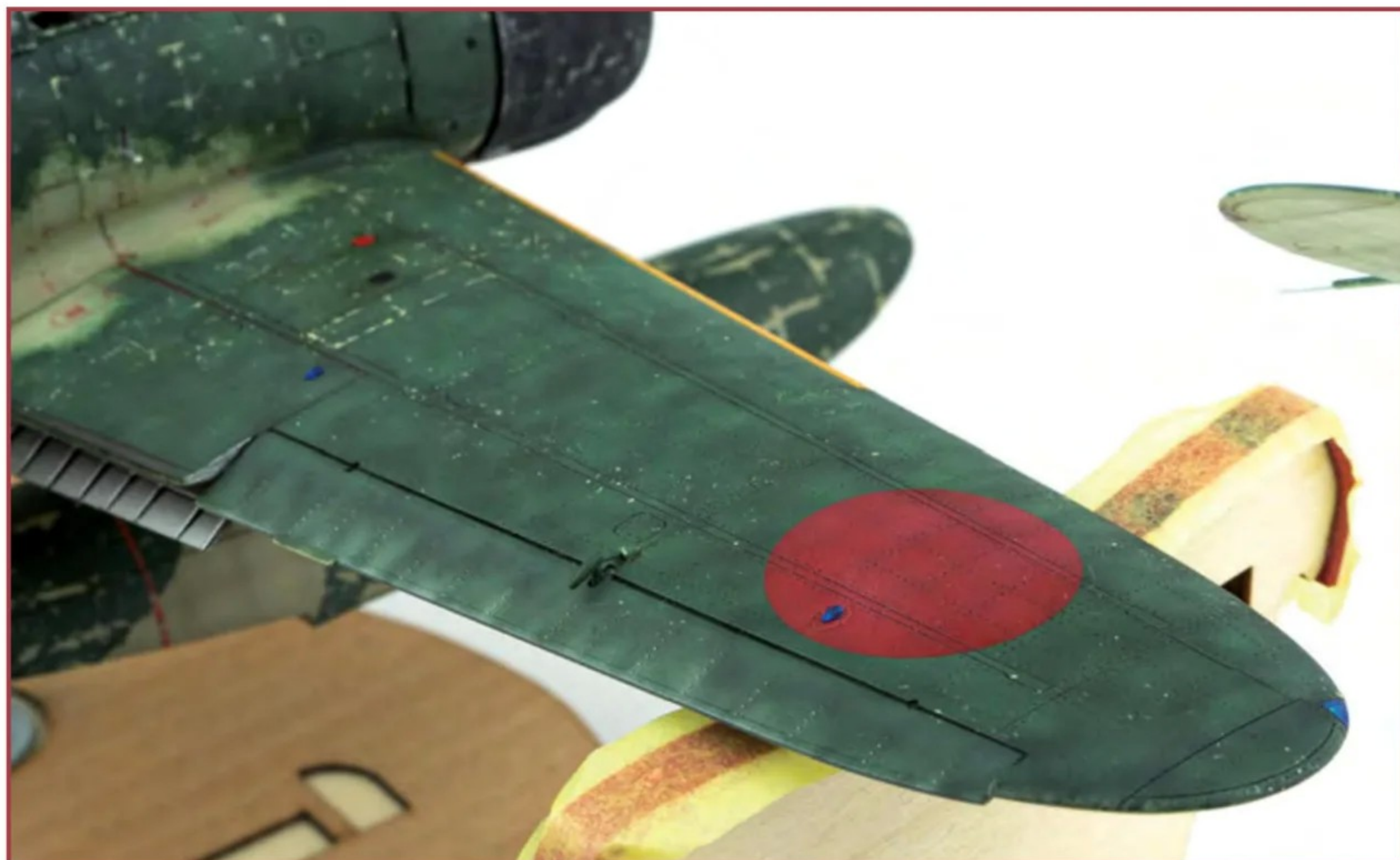
- Gunze Mr. Colour Paints – C08 Silver; Gunze C340 Field Green; C13 Neutral Grey; C15 IJN Green (Nakajima); C336 Hemp; Gunze C35 IJN Grey (Mitsubishi); Gunze C81 Russet; C385 Japanese Navy Marking; C158 Super Italian Red; GX-100 Super Clear III; GX113 Super Clear III UV Cut Flat
- Tamiya Acrylic Paints – X-23 Clear Blue
- Tamiya Lacquer Paints – LP-52 Clear Red
- Vallejo Acrylic Paints – 953 Yellow; 908 Carmine Red; 820 Off White;
- Vallejo Model Air Acrylic Paints – 057 Black; 094 Green; 085 Ferrari Red; 957 Flat Red; +own mixed shades
- Talens Rembrandt and Abteilung 502 oil paints

⊕ Excellent fit; high level of detail; dimensionally accurate; quick build; beautiful surface details of the model.

⊖ In some places, the sharpness of the riveting is lost and the rivets need to be renewed. The main center float could have a center attachment point.

RATING: 8.5 out of 10

Thanks to Eduard for the sample [www.eduard.com](http://www.eduard.com)



Added position lights and pulls to the control surfaces







***"WANT TO BUILD A  
SEAPLANE? THEN THE  
RUFÉ FROM EDUARD WILL  
BE A GOOD CHOICE..."***







Three marking options are offered.

## KIT PREVIEW

# EARLY SPITFIRE

The Editor checks out Kotare Models' brand new 1:32 scale Spitfire Mk.Ia (Mid) and concludes that it is just right.

**K**otare Models is the brainchild of modeller, veterinary specialist and owner of the fabulous Modelair hobby shop in Auckland New Zealand, Mark Robson.

Mark has put together a team with some names that will be familiar to Wingnut Wings fans including General Manager - Richard Alexander, Product Designer - Darren Mildenhall, Decal Artist - Malcolm Laird, Profile Artist - Ronny Bar and more.

The latest release for this new venture is a 1:32 scale early-production Spitfire Mk.I.

On their website, Kotare defines early-production as in the K9#### & L10## serial number range completed between May 1938 and September 1939, initially powered by a 1030hp Rolls-Royce Merlin II engine and featuring a 2-blade fixed pitch Watts propeller, 8 Browning .303" machine guns, triple ejector nozzle outlet exhaust manifolds, a tall un-tapered aerial mast and a rear fuselage adorned with lapped panels with raised rivets for ease of construction. The main planes and front of the fuselage were flush riveted and puttied and sanded smooth for improved performance.

Kotare also points out that numerous improvements were introduced throughout production, many of which were eventually retrofitted to earlier aircraft. These included gun heating, Rolls-Royce Merlin III engine, 3-blade dual-pitch DeHavilland propeller, exhaust manifolds of simplified construction, single tube pitot head, reflector gun sight and a taller canopy hood for improved visibility.

Kotare has included parts to cover the initial

configuration and the improvements in this box.

The main differences between Kotare's initial mid-production kit and this new early-production kit is a brand new sprue in grey plastic and new clear plastic parts.

The early-specific parts on the new grey sprue include:

- unarmoured and exposed fuel tank,
- original style non-trimmed cowlings,
- 2-blade Watts propeller and separate cap,
- open & closed "ring-pull" cockpit doors,
- ring & bead sights,
- narrow aerial mast,
- gun flash eliminators,
- anti-spin parachute guard,
- external Type 22 camera gun,
- dual tube pitot head,
- early style exhaust manifolds
- early-style instrument panel

Non-armoured canopies with flat and raised hoods and with open and closed options have been added to the clear sprue.

All the other sprues that appeared in the mid-production release - A, B, C, D and E, as well as the clear parts - are unchanged so if you want to build a mid-production from this box, all you will need is an appropriate set of decals.

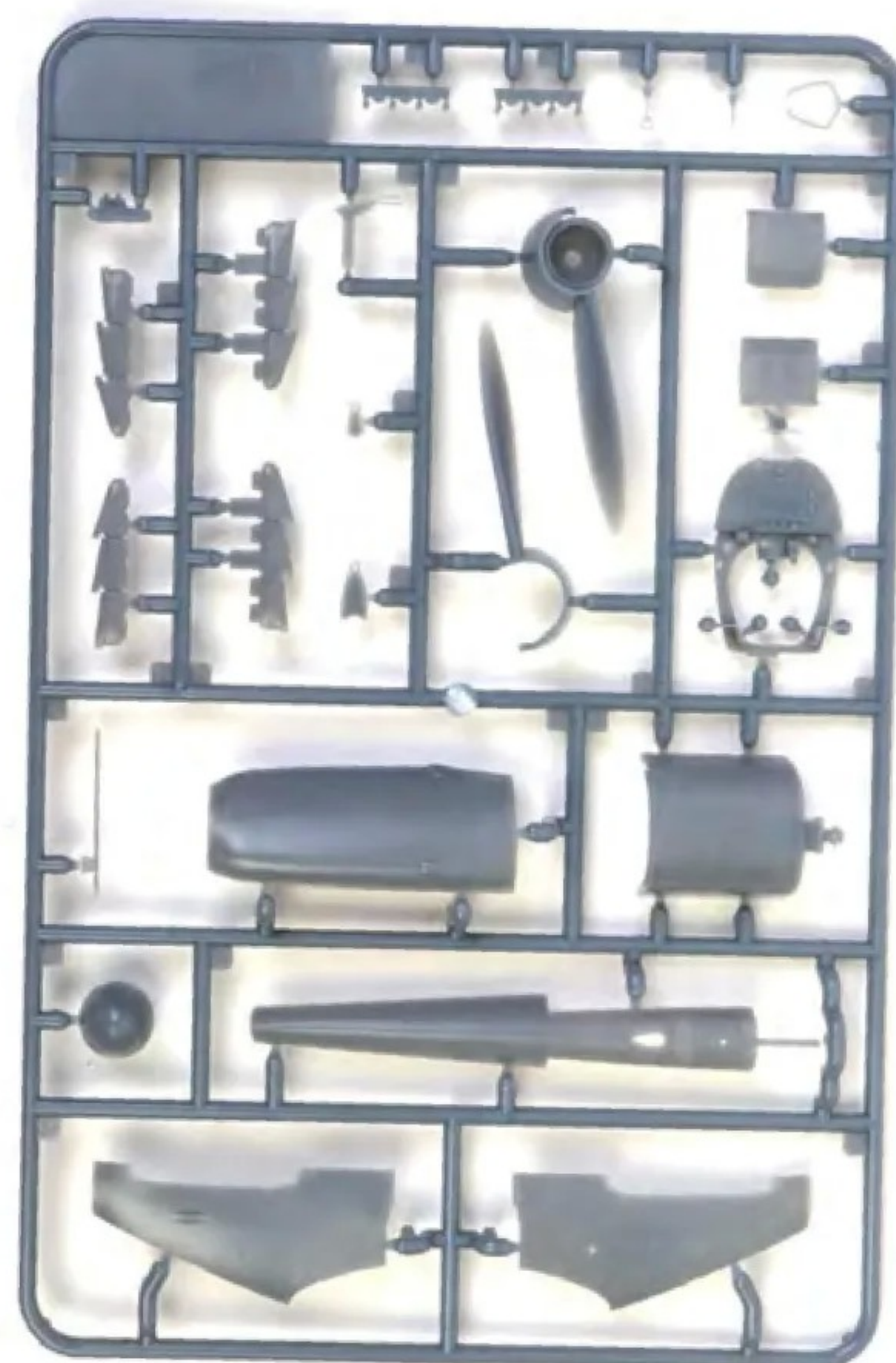
Let's take a look at the overall package.

First, let's talk about the number of parts. In today's era of uber-kits, manufacturers seem to be in a race to the highest number of parts possible. This is especially true of military kits but we have seen the parts count of aircraft kits rising too.

Kotare is bucking this trend with a very modest 133 grey plastic parts. They have managed this feat without compromising

detail. Kotare has moulded much of the detail as single parts. Looking at the port side lower cockpit sidewall for example, Kotare presents a single part with oxygen bottles, throttle quadrant, dials and boxes all moulded in place but detail does not suffer at all.

The kit is replete with similar examples – why design a seven-piece sub-assembly when you can mould it as one part? This seems to



This is the all-new sprue with the early options on board.



be the Kotare Spitfire's philosophy.

I think this approach will appeal to many modellers who would like to build a beautifully detailed kit but feel intimidated by the daunting parts count of many recent releases.

It also points to Kotare's Spitfires as kits to build, not to sit on the shelf.

Surface textures are subtle and convincing. A combination of recessed panel lines, recessed fasteners and raised rivets delivers an authentic effect overall.

Fabric effect is limited to stitched strips.

The cockpit is a work of art. I have already mentioned the sidewalls, but the seat and the instrument panel are also worthy of special notice. The instrument panel is a single solid plastic part with dial, bezel and switch detail moulded crisply in place. The compass and mount are moulded onto the bottom of the panel. Decals are supplied for the dial detail in single, pairs and trios.

I particularly like that Kotare has provided the option of a seat with moulded-on Sutton harness.

The cockpit floor accurately depicts the multi-layered bottomless effect. The control yoke is a separate part, allowing it to be posed to taste.

There is plenty of detail inside the fuselage aft of the pilot too.

Also interesting, Kotare calls out the main cockpit colour as Supermarine Interior Green Semi Gloss, also sometimes called Apple Green. The recommended Tamiya mix is 2 parts XF-71 IJN Cockpit Green and 1 part X-28 Park Green. Some cockpit elements such as the pilot's seat and the control column are called out as the more familiar Interior Grey Green.

The long kinked undercarriage hand pump on the starboard sidewall is accurate for an early to mid-production Spitfire.

The fuselage has a number of separate inserts and hatches including the accumulator door, wireless access hatch, engine cowlings and separate spine.

The cockpit door may be posed open or

closed.

Wings are broken down conventionally with full-span lower and separate port and starboard upper wing parts. A long span wing spar is included, ensuring the correct dihedral. The eight Browning .303 machine gun barrels are located in correctly spaced and recessed in the lower wing. The instructions suggest the barrels may be drilled out for more detail.

The wheel well walls are provided as a single part for each side. A really nice example of attention to detail is the jack for the early-style undercarriage part as separate parts for each landing gear well. You'll need to drill or cut out a slot in the undercarriage walls to accommodate the jacks.

The five-spoke main wheels are supplied in two parts each (no vinyl - hooray!). They are bulged and flattened and keyed to make sure the flat spot sits on the ground.

The wing fillets are separate parts, as are ailerons, elevators and rudder. The rudder and elevators are moulded with locating tabs, but you may simply cut these off if you wish to pose your rudder and elevators offset.

The kit offers the choice of two-bladed fixed wooden Watts, as well as the de Havilland propeller assemblies. The Watts propeller is split into two halves plus a separate cap.

The de Havilland propeller is moulded as a single part with the pitch already set.

The clear parts are thin and free from distortion.

The canopy offers the choice of a single part if posed closed, or with separate windscreen, sliding section and rear for the open canopy option. The external armoured glass is moulded as part of the windscreen in both cases.

The new early-style flat canopy and un-armoured windscreen are similarly presented as three parts if posed open or a single part for a closed canopy.

The instructions are as much an educational experience as they are assembly directions. There are many detail notes as well as

helpfully captioned reference photos and illustrations throughout.

The 28 page full-colour A-4 book offers assembly instructions over 14 steps, four view colour illustrations for the three marking option plus reference photos and notes for each of the three marking options, stencil diagram and additional reference.

The large glossy decal sheet provides three marking options plus stencils, instrument panel decals, nicely random leading edge machine gun patches and stencils.

Registration and colour saturation are perfect on my sample. They are printed in Italy so presumably Cartograf – another indicator of high quality.

The sheet includes decal dials for the instrument panel and placards for the cockpit.

The inclusion of red dope patches for the machine gun openings in the wing leading edges is a nice touch too.

## CONCLUSION

Another Spitfire? Yes please!

This is the first time that we have had a true early production Spitfire Mk.I in 1:32 scale.

Kotare Models has again delivered the Goldilocks Spitfire – detail and buildability are just right. The relatively modest parts count does not compromise detail at all.

Kotare's Spitfires are clearly the best 1:32 scale Spitfire Mk.I kits available today. Everything you need to model a beautifully detailed early and pre-war Spitfire is right here in the box.

Everything you need to model a beautifully detailed early and pre-war Spitfire is right here in the box. It looks like all the parts for the previous mid-production Spitfire Mk.Ia are still on the sprues too, so this represents a very versatile box of Spitfire bits.

This is another superb 1:32 scale Spitfire offering from Kotare. •

Thanks to Kotare Models for the sample



2-blade Watts propeller.



Separate cap.



Early-style instrument panel.



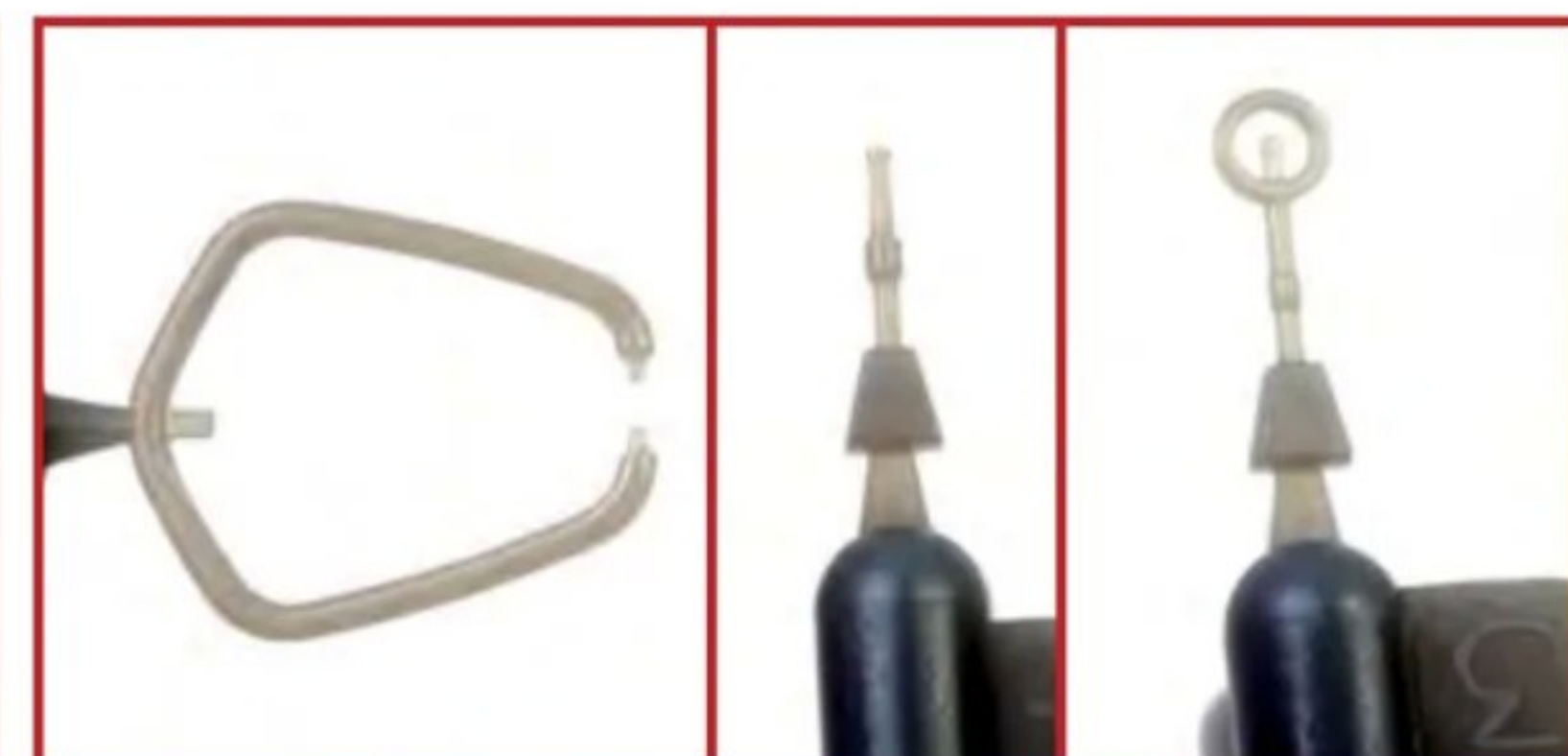
Early style exhaust manifolds.



Unarmoured and exposed fuel tank. Original style non-trimmed cowlings – top...



...and side.



Anti-spin parachute guard.



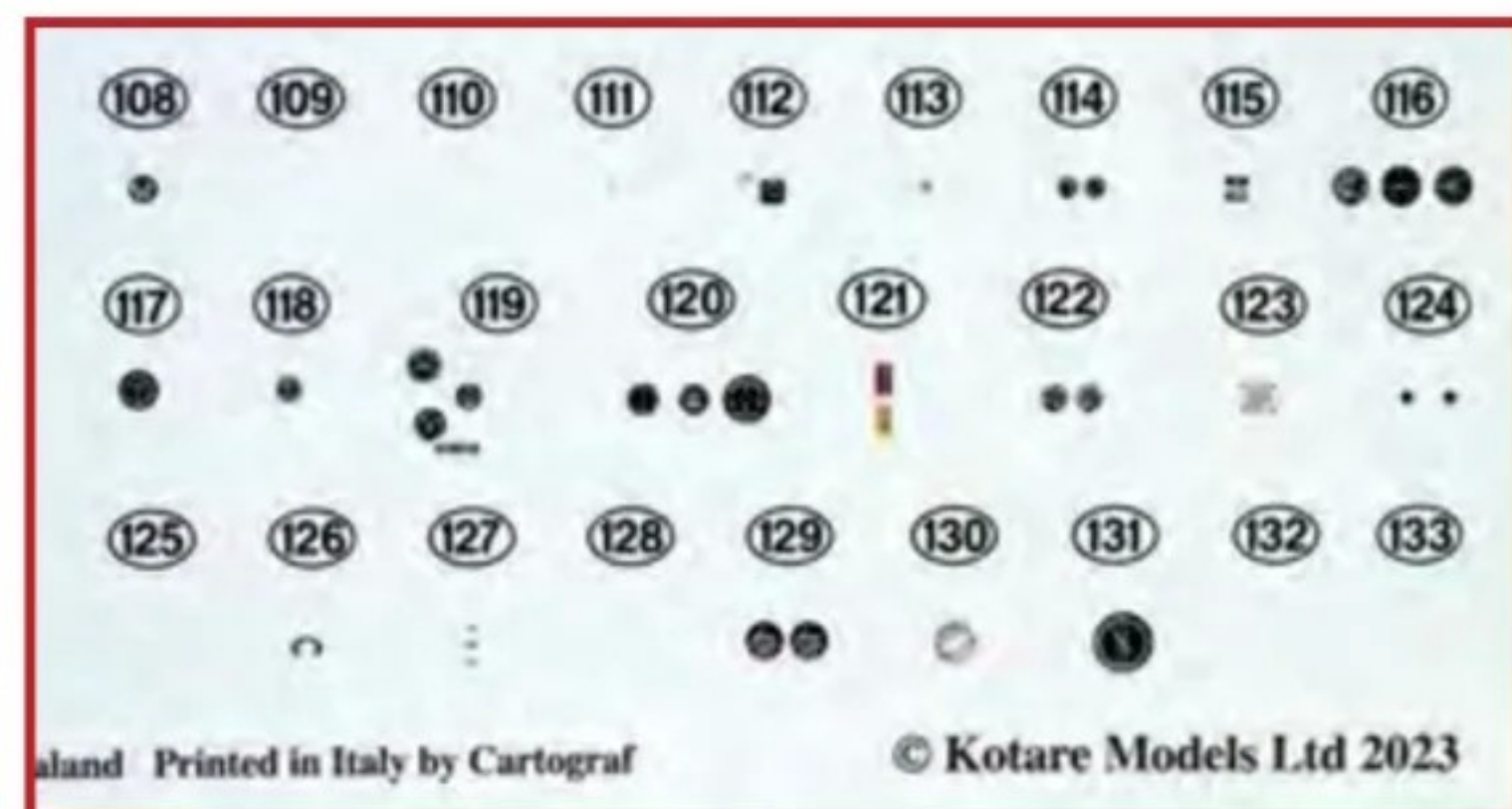
Hollowed-out gun flash eliminators.



Non-armoured canopies with flat and raised hoods and with open and closed options.



Kit decal sheet.



The decal sheet includes optional dials for the instrument panel.





## "SHAKE THE BOX AND A MODEL COMES OUT"

used to be a figure of speech for a kit that is easy to build, but in these days of 3D printing it is almost a literal truth. In fact, sometimes you don't even have to shake the box. Just push the button and wait.

Of course, this was not always the case. Choice of kits was more limited in earlier times and customized conversions and corrections were fewer than today.

If you wanted to convert a kit in the olden days, it was using the tools and materials that were available at the time. This project from 2007 is a good example. All of the techniques used then will be equally valid today.

The subject of this article is one of the

peculiar B-25D Mitchell hybrids used by some Commonwealth, Soviet, Dutch and RAAF units. These unusual aircraft featured the fuselage side and tail gun positions of the B-25J, yet retained the turret position and windows of the B-25D.

I wanted to build one of these odd birds for a long time now. Originally, I was going to modify the old Revell B-25C kit. When the Accurate Miniatures kit was released, I thought that I would sacrifice a Monogram kit by cutting out the side gun positions and installing them in the Accurate Miniatures fuselage.

However, in the end I decided to take a completely different route that would provide

the opportunity to exercise some scratch building and modification techniques. I could relocate the turret position, remove the blast panels from the nose, cut out some fuselage windows and, voila, a hybrid B-25D!

### THE CONVERSION

The basis of the conversion was an original issue 1:48 scale Monogram B-25J in glorious silver plastic (no paint required, especially if you like your natural metal with mould flow channels).

I originally did some testing of Micro Krystal Kleer on the old Revell fuselage for making the windows. The results were not bad, but





# BACK TO BASICS

**The Editor** backdates Monogram's 1:48 scale B-25J Mitchell to a B-25D the old-fashioned way using plastic sheet, putty, Dymo tape, scribing tool and rule.



there were some bubbles visible on the slightly wavy surface.

I wanted to finish all the conversion work before beginning construction.

I started with the raised blast panels on each side of the nose. These are very prominent, so I was concerned that even a coarse file would not be practical. I therefore attacked the panels with a grinding disk in my Dremel motor tool.

I knew that I would be hacking at the plastic, so my plan was to fill the resulting rough surface with Milliput then sand it smooth again.

Next, I marked out the positions of the new fuselage windows and made a start to the tricky process of cutting them out by scribing deep outlines with the aid of a template. I then drilled out several holes in each window, which permitted me to get the tip of a hobby

blade into the opening and nibble out the rest of the plastic.

The blast panels of the nose were now smoothed using a coarse sander followed by progressively finer grades. I was surprised that the plastic had not suffered any major blemishes after the harsh treatment with the Dremel. A few spots of Milliput on each side of the nose restored the surface. It was also interesting to see that, even though the panels had been completely eliminated, the plastic retained a prominent ghost (maybe a poltergeist) of the rectangles.

## RELOCATING THE TURRET

One of the most important aspects of this backdate was relocating the turret from the front to the mid upper fuselage. I started by cutting a circle template from a self-adhesive

Post-It Note using my Olfa Circle Cutter. I scribed a line around the template, also using the circle cutter.

Next, I fitted my Dremel motor tool with a round cutting wheel and sliced into the circle, stopping each slice just inside the scored circumference of the circle. At this stage I simply nibbled away the remnants of the plastic still inside the circle with sprue cutter and a sharp knife.

Test fitting the turret indicated that the opening was too big on the port side. I therefore lined the semi-circle with a sleeve of styrene strip. The raised protrusion was cut off with a sharp hobby blade.

Revell's 1:48 scale B-25C kit supplies an insert to blank off the lower gun turret of that kit. This part was a fairly close fit for the opening of the original Monogram B-25J turret ➤



← position, so it was superglued in place.

With the grinding and some of the fuselage conversion done, I decided to putty any gaps and gouges. My weapon of choice for this type of job is Milliput White.

The relatively large amount of putty on the front of the starboard side was required to build up the canopy sill, which I had inadvertently thinned down while grinding the blast plates off.

These Aussie Mitchell II's had their waist windows in line with each other, not staggered like the J model. I finally decided that I could not get away with leaving the port side waist gun position where it was, so I resolved to hack it out the fuselage side and relocate it forward.

The first step was to outline the area to be removed in self-adhesive Dymo tape. This rectangle was scribed deeply as a guide to cut the section out.

After a few ineffectual passes with a hobby knife, I fetched my razor saw to do the heavy cutting. Attacking the scribed line at an angle worked well, resulting in a fairly clean and narrow cut line.

The excised rectangle was now ready for modification.

The left side of the rectangle was carefully cut off and glued next to the right side of the window. This results in the window being moved forward.

The modified insert was test fitted in the fuselage. As a result, plastic strip was added to the top and (a narrow wedge) to the right side to shim the slight gaps left after the saw cuts.

The join lines were filled with Milliput White and left to set.

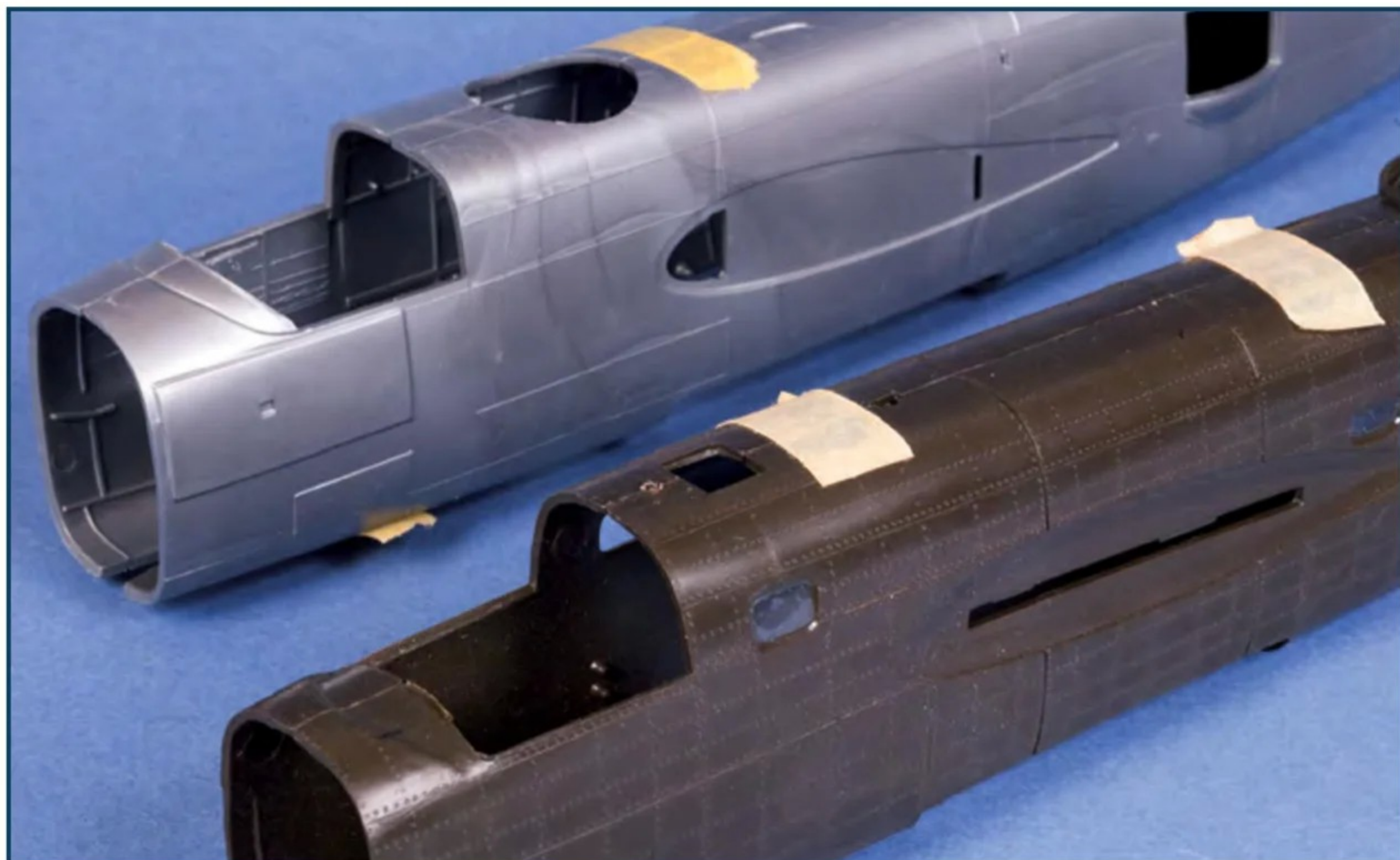
At this stage, somebody described this project as an example of "gritted-teeth, bare-knuckled modeling". Actually, I did feel as if I spent a fair bit of time with gritted teeth while working on this model. It seemed that every time I found and overcame an unexpected challenge, another one popped up. So it should have been no real surprise that when I finished relocating the port side window, another hurdle was lobbed into the path.

It would seem that not only were the side windows in a different position, but the "eyebrow" fairings above the windows was much larger - in fact around the same size as the bottom fairing (thanks to Peter Johnstone for the information).

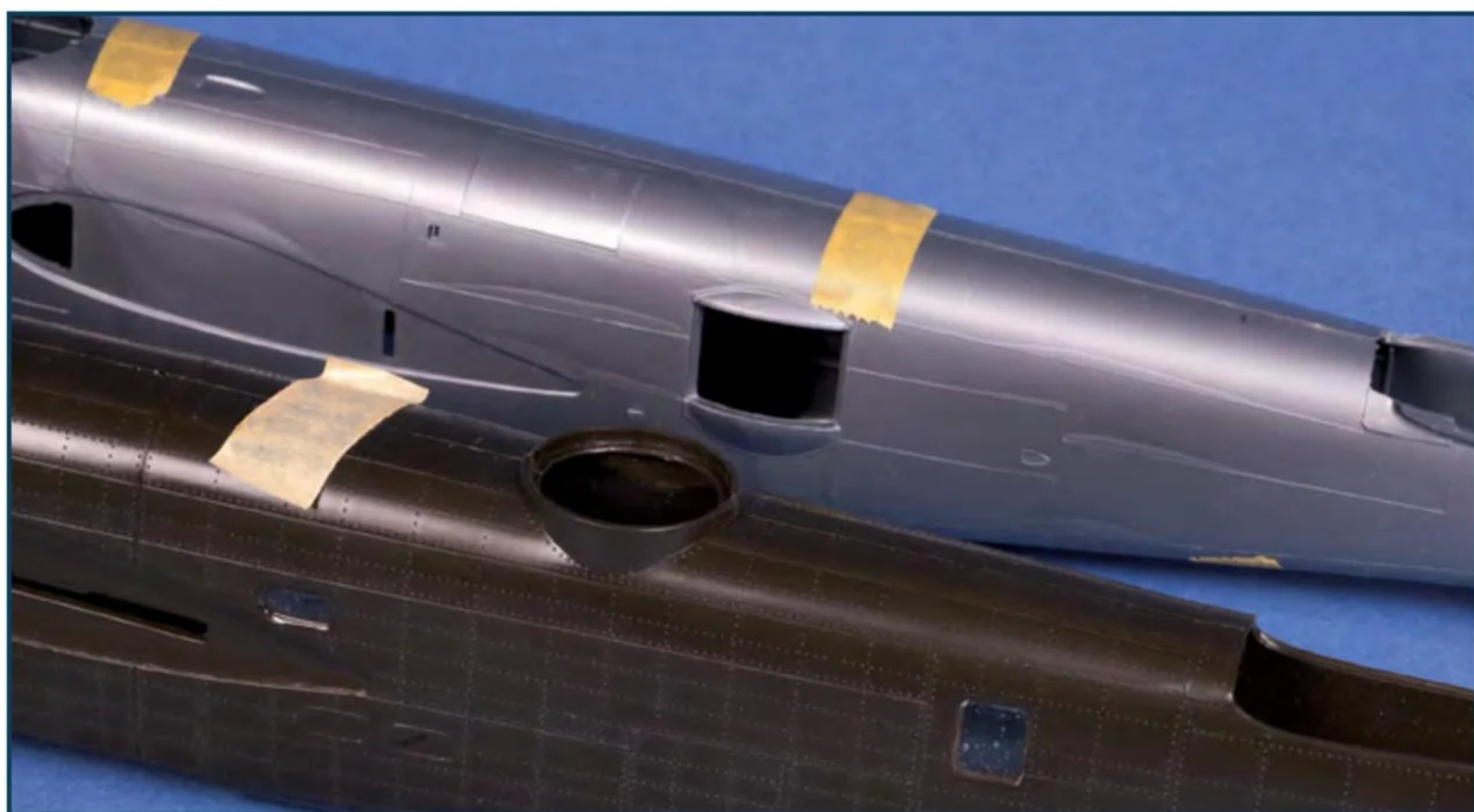
Before I decided how to tackle this little change, I realised that I would have to rescribe at least the mid-rear port side fuselage where the panel lines had been obliterated during the side window surgery. As long as I was doing that, I thought I had better rescribe the whole fuselage. The raised panel lines were sanded off, leaving ghostly lines as a fairly clear template. I used self-adhesive Dymo tape as a guide for vertical panel lines, and a photo-etched straight edge taped to the model for horizontal lines. I made sure that I carefully applied around three light strokes to each scribed line.

In total, scribing both fuselage halves took around 3.5 hours. An added benefit was that I applied the D panel arrangement on the starboard side where the circular escape hatch used to be. It also gave me some time to think about how to achieve the new large bulged side window fairings.

For the bulges, I first cut a piece of Dymo



Revell's old B-25D may be seen in the foreground, with the Monogram kit in the rear. Note the hole for the forward upper turret in the Monogram kit fuselage.



The turret for the B-25D was located on the rear fuselage.



The blast panels were ground off the nose of the Monogram kit using a Dremel motor tool.



Positions for new windows and future filling were marked onto the kit fuselage.



The outlines new small windows were first scribed with the aid of a template.



The windows were then nibbled out with a drill and sharp knife.



tape as a template for the shape of the higher upper curve of the new fairing. This was stuck to the fuselage side.

Next, I mixed up a batch of Milliput and applied a thin sausage along the curved upper line. This was followed by a smaller blob in the middle of the new fairing. The putty was then shaped first with a small trowel, then with a damp fingertip, until it was approximately the right size and shape.

The Dymo tape was removed while the putty was still pliable. The thickness of the tape left a realistic ridge similar to the ridge on the bottom fairing. A few tiny adjustments were made to fair the top curve with the fuselage side using a damp toothpick.

I also found out just as I finished this modification that the profile of the B-25D rear fuselage was different to the J. The D dropped off aft of the turret, resulting in a rear fuselage that was seven inches shallower than the J model at the rear gunner's position. I had not picked this up (it was not in the drawings of the Aussie Ds, and the Revell C/D fuselage is the same depth or even a little deeper than the Monogram J fuselage in this area), but it was really too late for me to do anything about it without undoing a lot of the work that I had already done.

If I was going to repeat this project, I would probably backfill the inside of the upper rear fuselage halves with Milliput, lower the mount for the horizontal tail surfaces (by cutting it out and removing a section below it), then sand down the height and profile of the rear fuselage by around 3 mm.

With the major surgery now complete, I wanted to make sure that all the modified sections were smoothly blended with the surface of the kit.

The fuselage was treated to a coat of Tamiya Grey Primer straight from the can.

This primer coat highlighted a number of incompletely filled join seams, a few inconsistent panel lines and some small gouges that had not been eliminated. These were highlighted with a pencil for later attention.

## INTERIOR

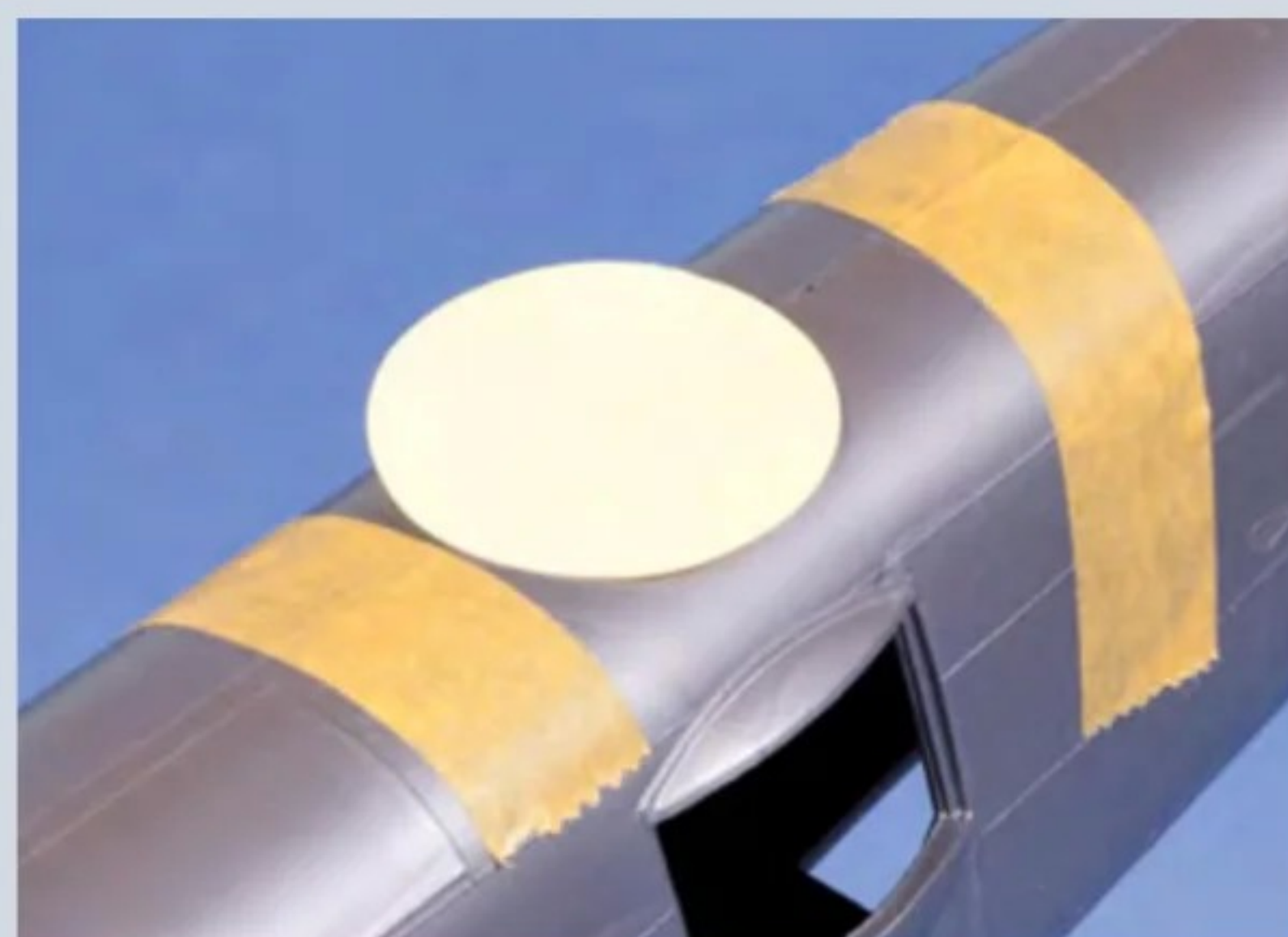
At this stage I started to fit out the interior. As the fuselage would be buttoned up, I did not add any extra detail to the main interior. The detail provided by Monogram was pretty good anyway. The only modification was to provide some structural detail around the port side waist gun window to hide the scarring of the relocation surgery.

Earlier on, I had installed oversized windows in each side of the rear fuselage. These were cut from a cover of a CD case following the suggestion of Tony Bell. The plastic was quite brittle, but it responded very well to the "score and snap" approach. The windows were faired in and the clear sections were masked with inside and out with Tamiya tape.

An article by RAAF researcher Steve MacKenzie from IPMS NSW magazine Vol.15, No.3 provided some great information about the modified tail gun position. On the basis of this information, I cut off part of the tail at an angle.

The same article provided information about the early style fuselage gun packs, and a ventilation pipe under the nose. Great stuff.

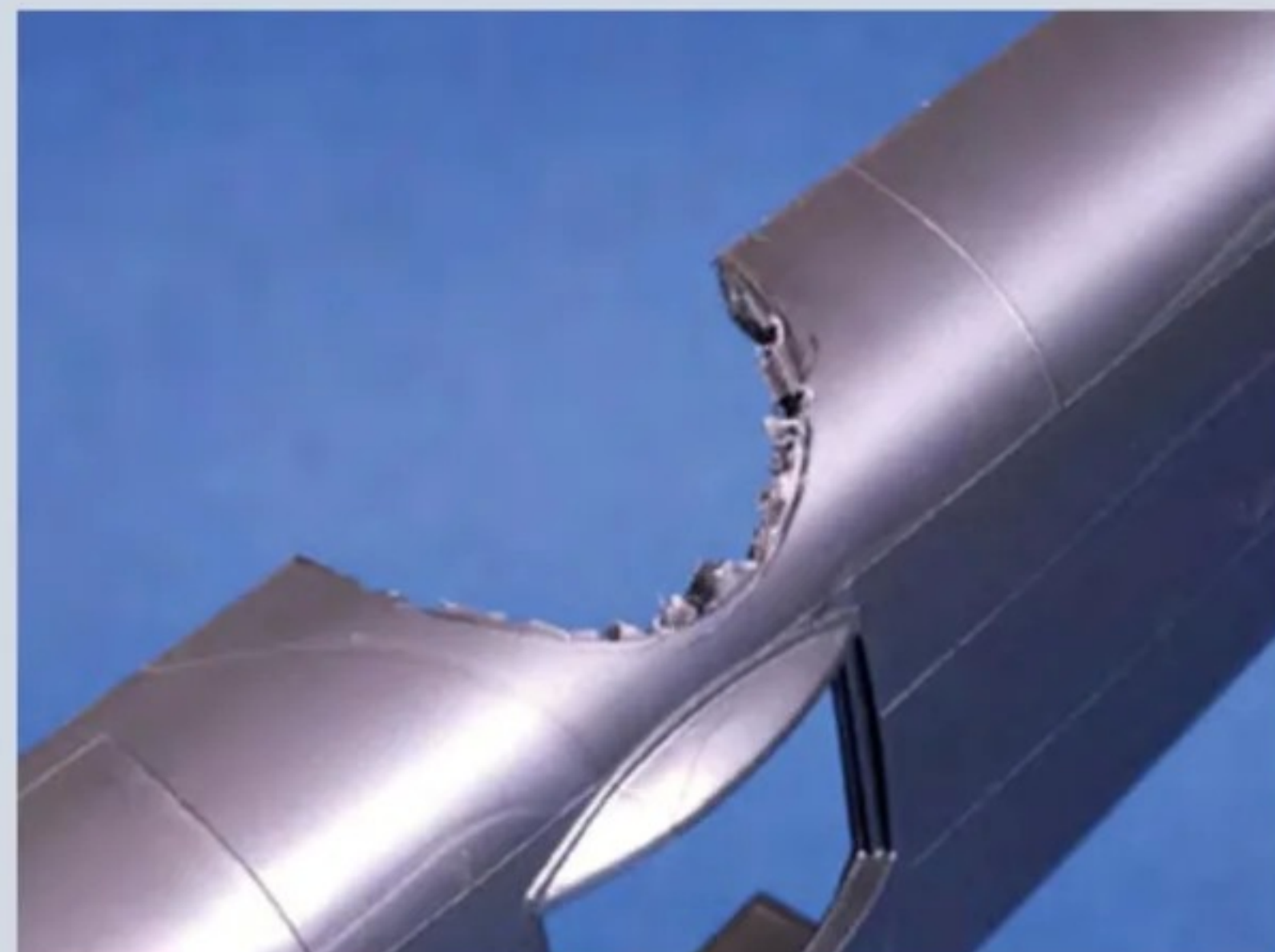
The opening for the navigator's astrodome was cut out of the forward fuselage roof. The ➤



The new position for the rear upper turret was marked with a simple paper template.



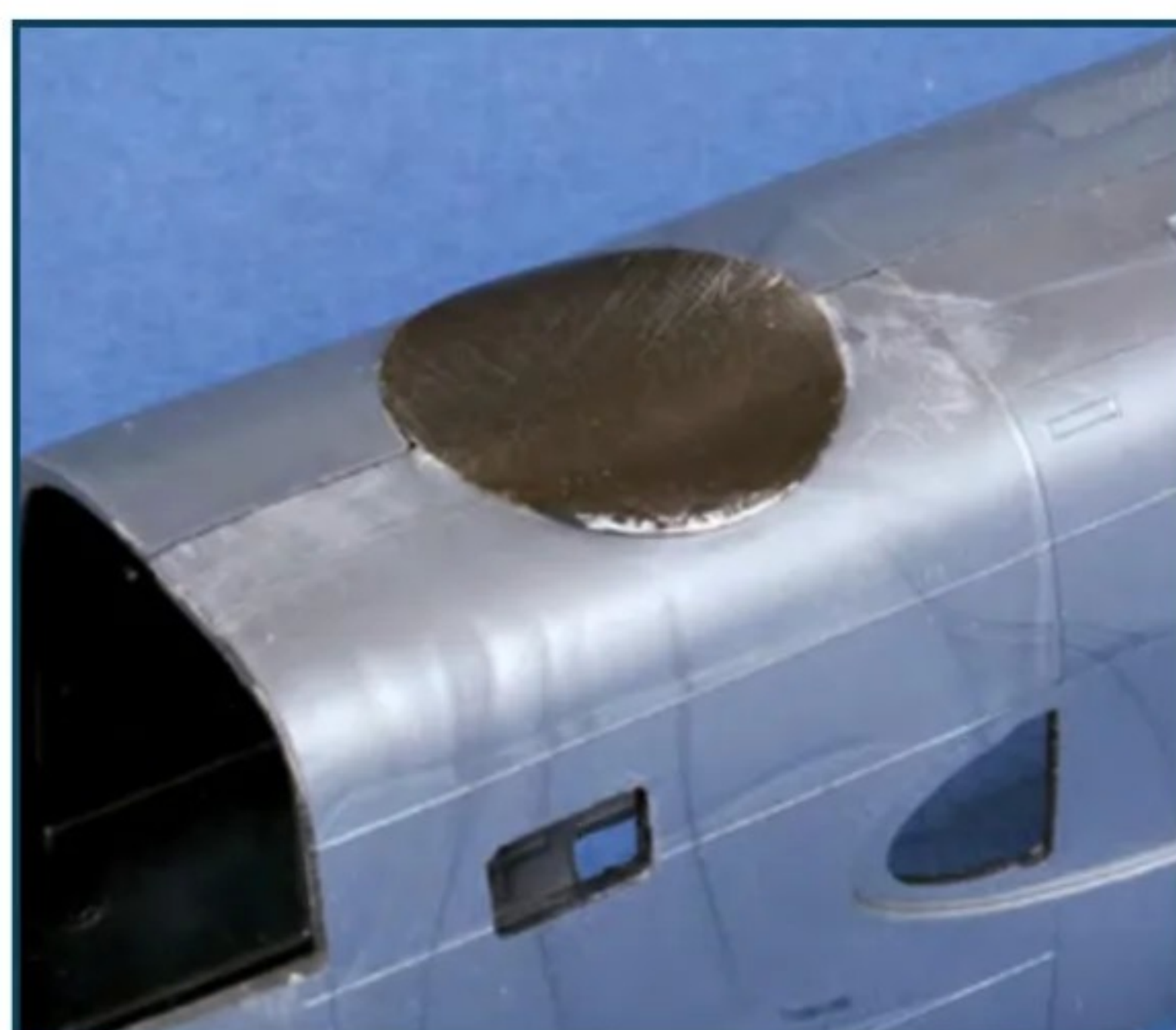
The hole was made by first cutting slots to the edge of the circle using the grinding wheel attachment on my Dremel...



...then cutting off the excess with a knife.



Plastic sheet was used to form a raised ridge around the opening. This was later cut down and sanded.



The front turret opening was plugged with a blank left over from the Revell B-25D. This was actually designed to close the lower turret position, but it fitted well here.

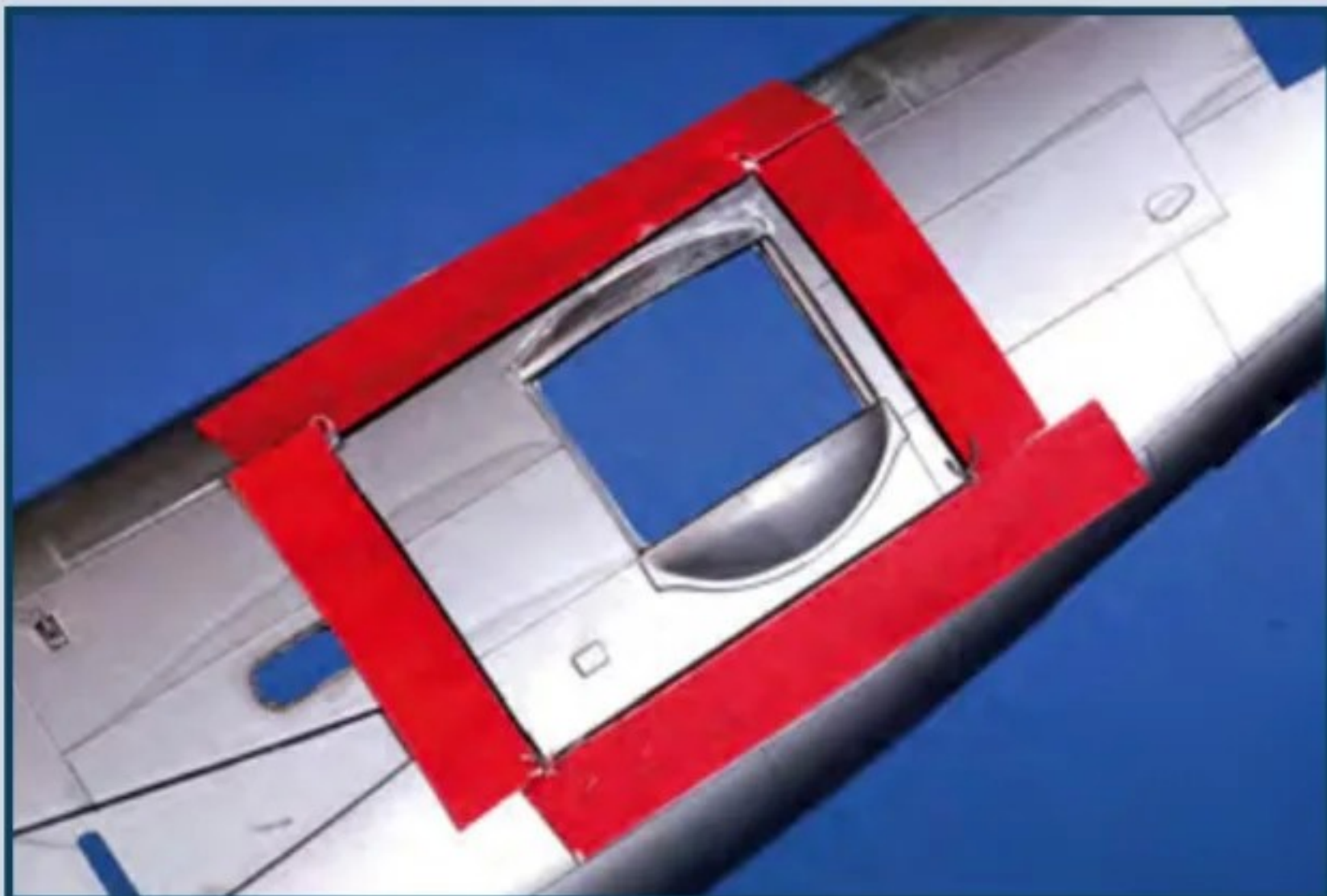


Milliput was the filler of choice. The various scars, gaps and join lines were filled for the first time, but not the last!



Some of the hatches were not appropriate for this variant, so these were filled at the same time.





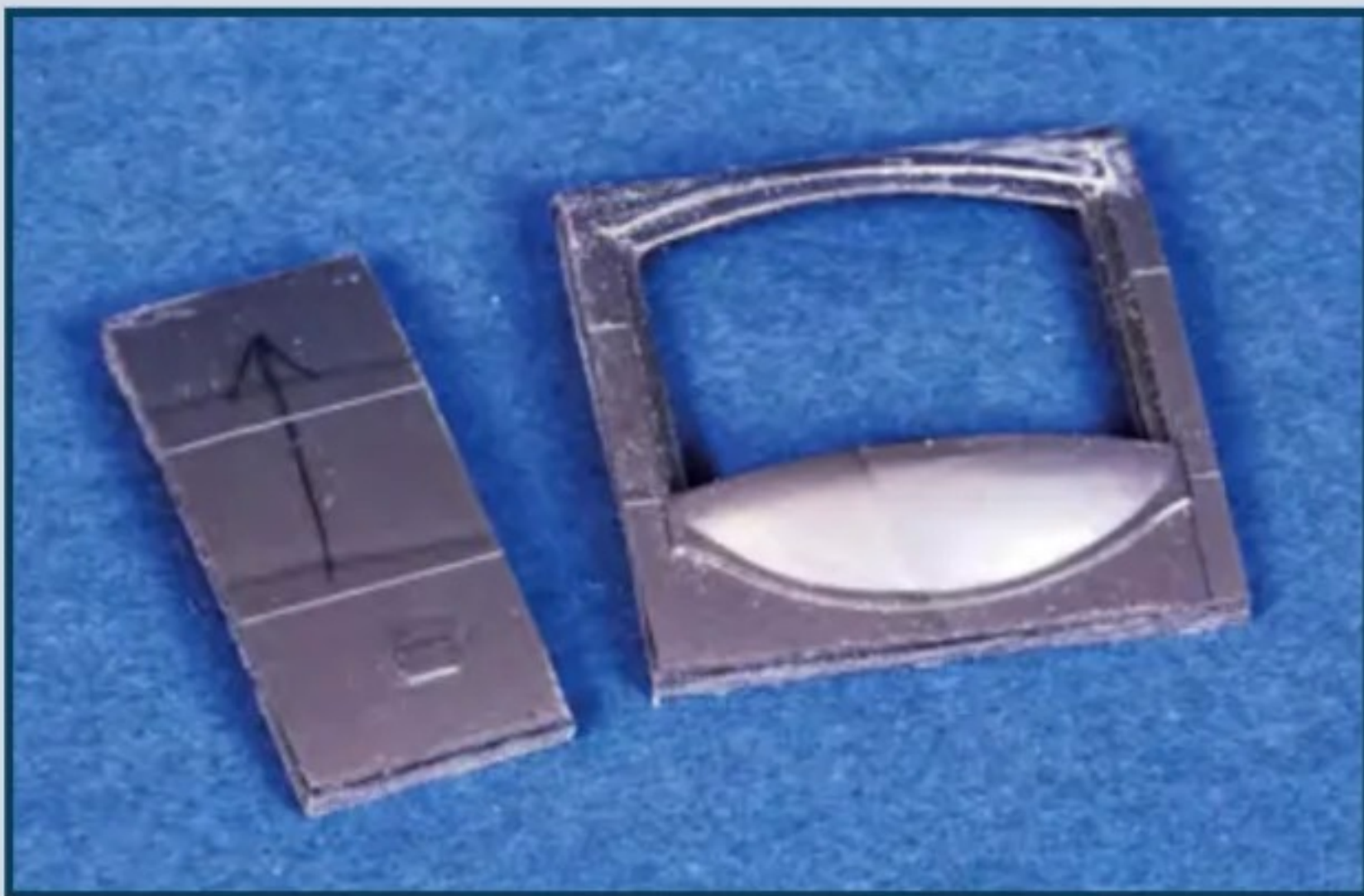
The port side waist gun position was marked for removal using Dymo tape as a guide.



A JLC Razor Saw was used to carefully remove the section of fuselage containing the waist gun position.



The JLC saw is ideal for this task as it is very thin, and not much plastic is lost in the operation.



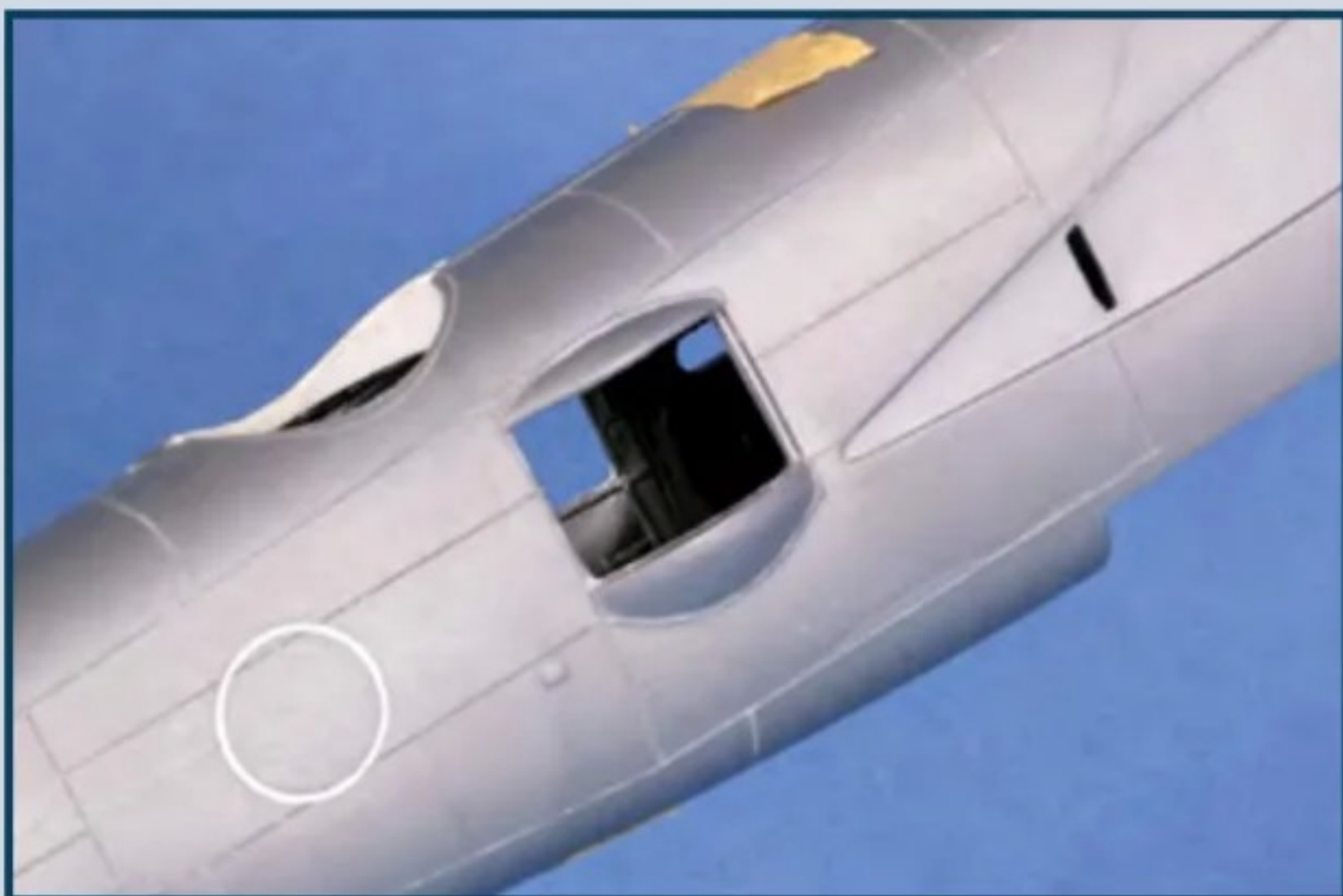
The excised section was cut into two pieces for later reassembly.



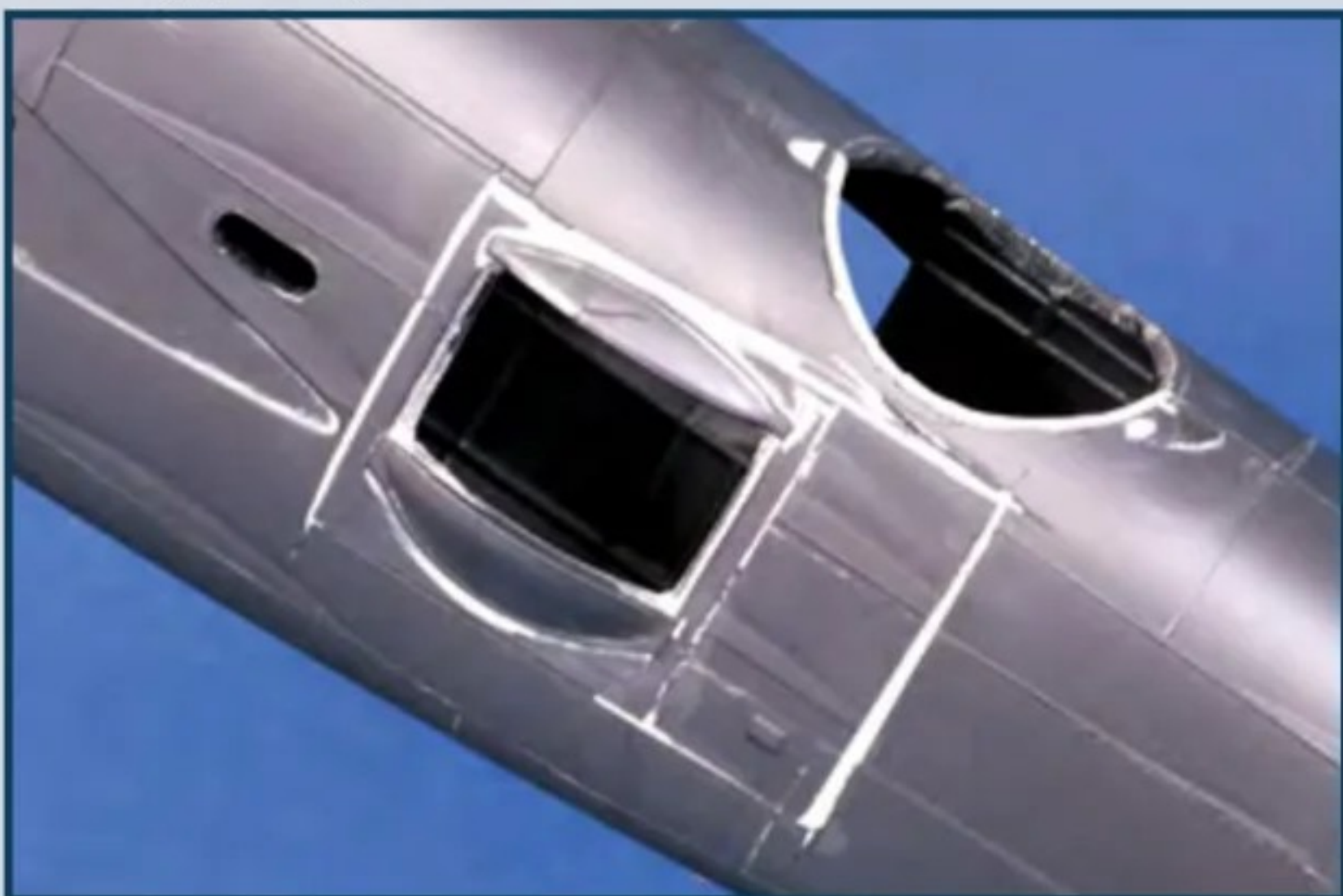
The waist gun position was shifted forward, with the short section glued aft. Two thin pieces of plastic strip were used to fill the narrow gap left by the saw.



Milliput was broken out again to fill the join lines of the new waist gun position.



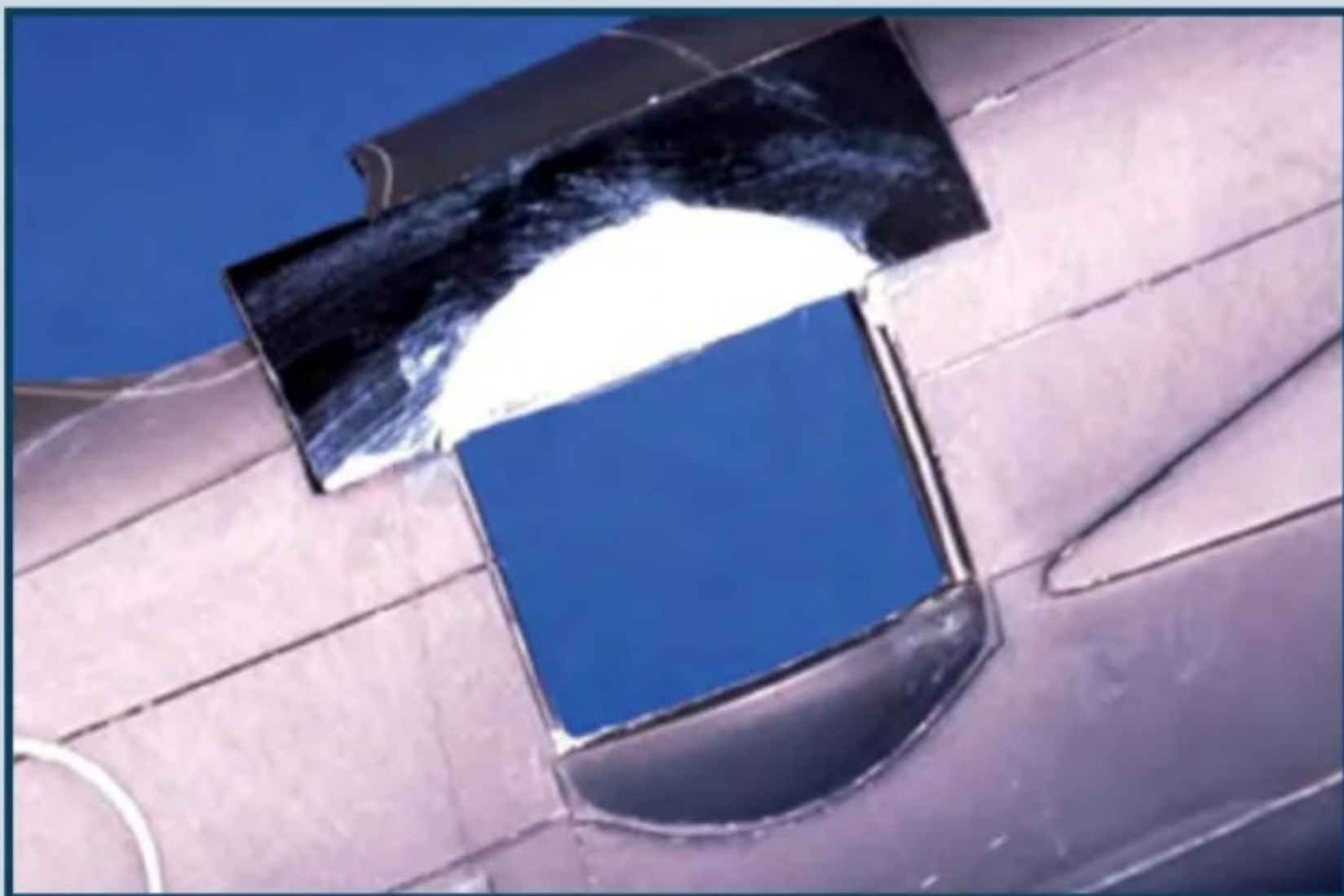
This surgery brings the previously staggered waist guns in line with each other on opposite sides of the fuselage.



The port side waist gun station, now sanded smooth. Note that the new rear window is also in place, filled and sanded down. The clear window was cut from the clear cover of a compact disk case.



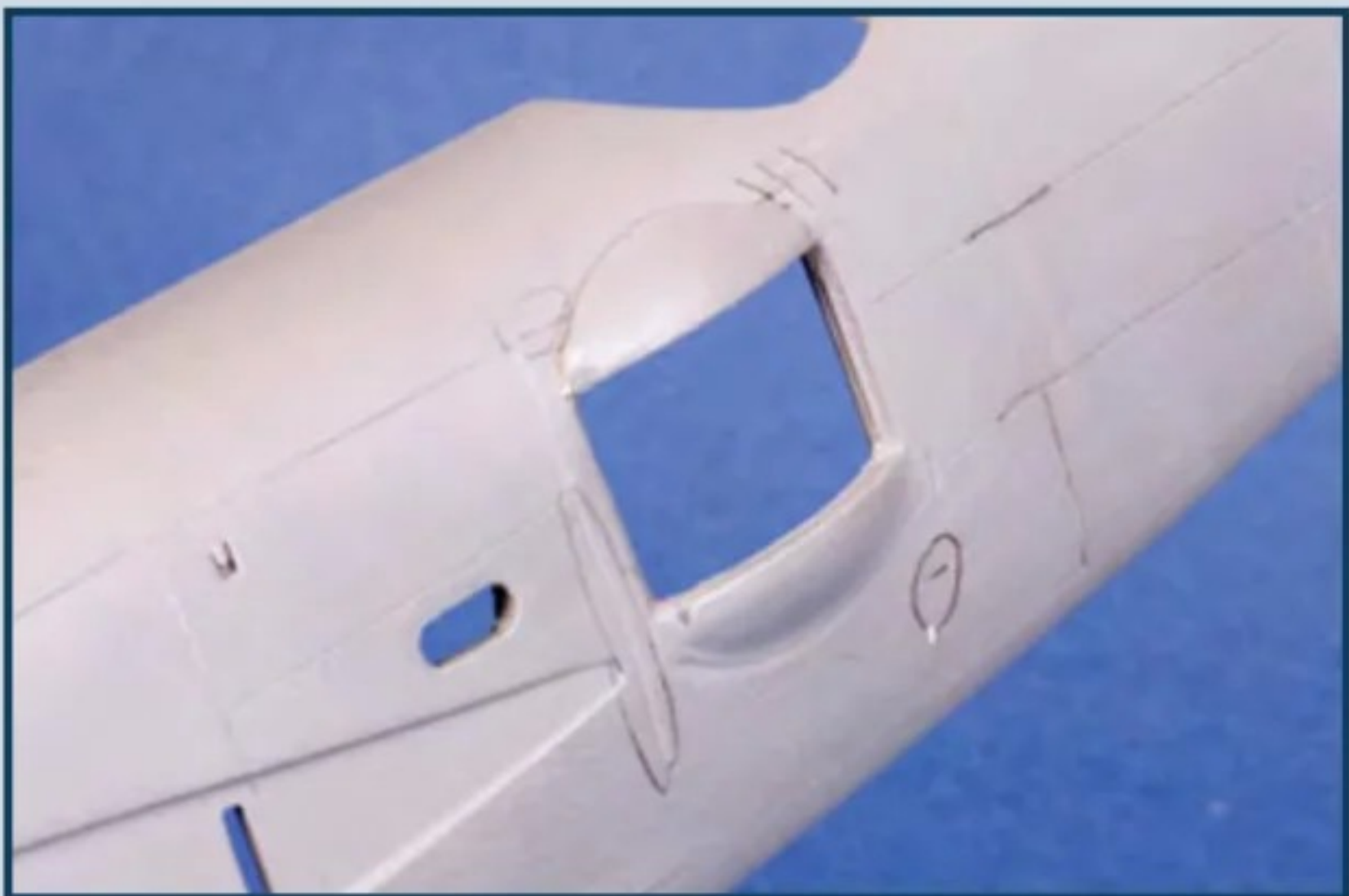
The new eyebrows for both waist gun positions were kicked off with a template of the upper outline cut from self-adhesive Dymo tape.



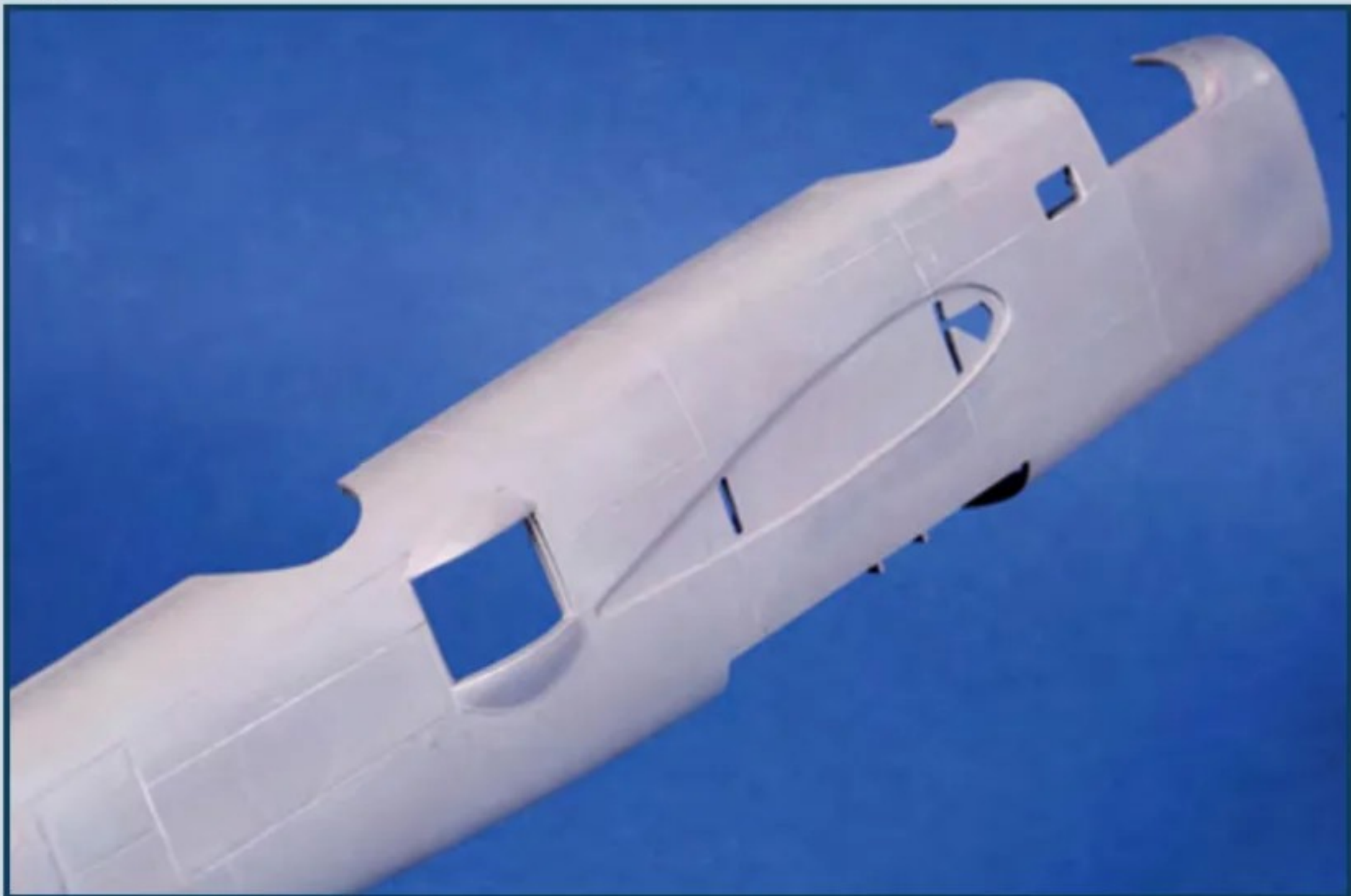
Milliput was then used to build up the shape of the "eyebrow". The two-part epoxy putty was smoothed and shaped with a damp fingertip.



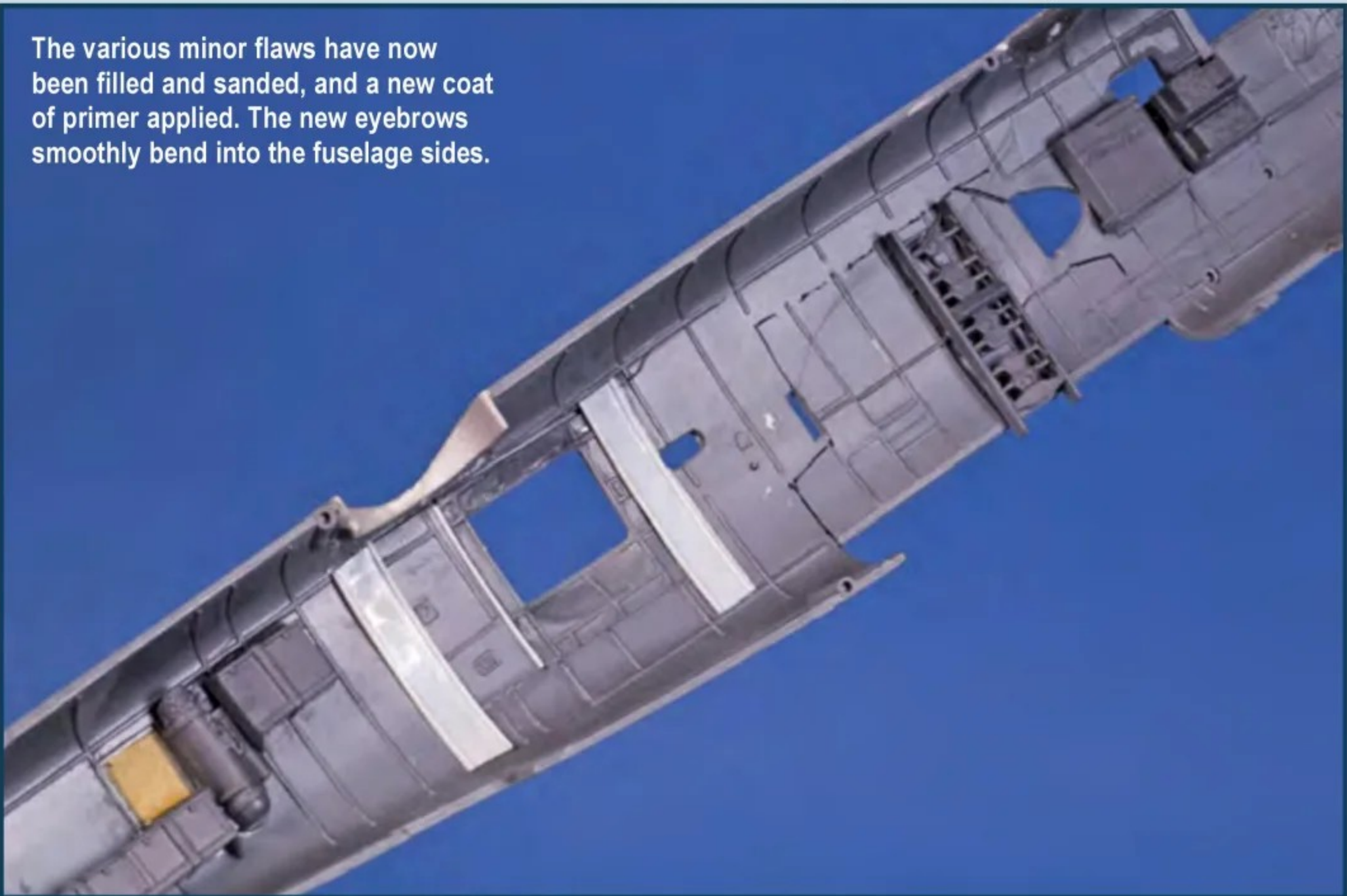
The Dymo tape was removed and the putty allowed to set before the eyebrows were sanded to their final shape.



Grey primer was sprayed on the fuselage halves at this stage to check for lingering gaps and other imperfections. A few were found and marked with pencil for later repair.



Monogram provides a decent interior for their bomber kits. The inside of the port waist gun position was covered with plastic strip to hide the unsightly joins.



The various minor flaws have now been filled and sanded, and a new coat of primer applied. The new eyebrows smoothly bend into the fuselage sides.



◀ fuselage halves were taped together tightly as the opening crossed the fuselage halves and the forward turret plug. A circular template was used to mark out the opening and a small pilot hole was drilled. Next, a round dental burr was fitted to my Dremel motor tool to enlarge the hole. The job was finished with a sharp hobby knife to clean up any jagged residue of plastic.

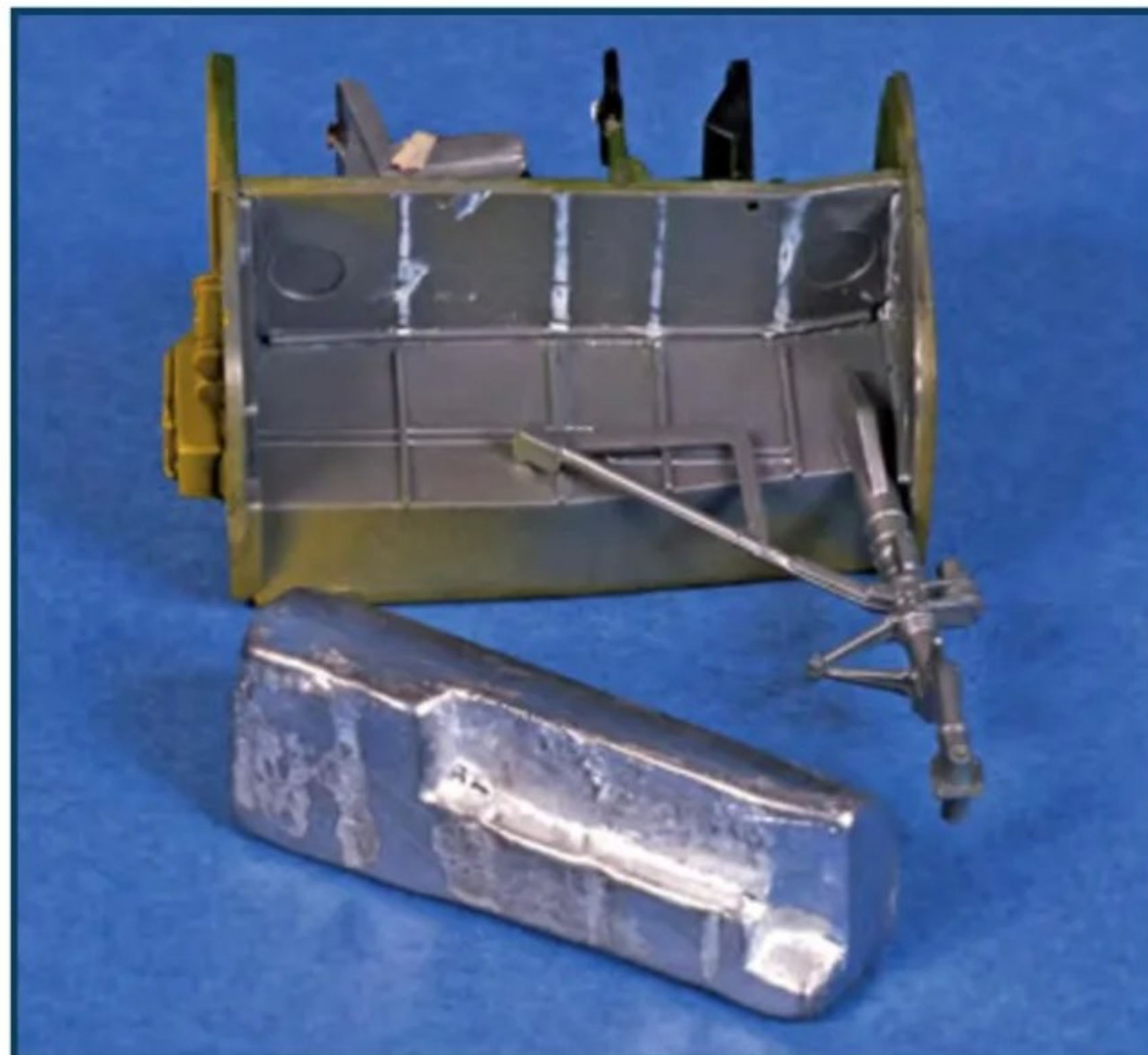
My Mitchell would be mostly buttoned up, so we will only see glimpses of the interior through the nose glazing, canopy, turret and various windows. I therefore decided not to expend too much effort on detailing this large expanse.

I painted the model's interior mostly according to the excellent article on the IPMS Stockholm website [http://www.ipmsstockholm.org/magazine/2004/02/stuff\\_eng\\_interior\\_colours\\_us\\_part2.htm](http://www.ipmsstockholm.org/magazine/2004/02/stuff_eng_interior_colours_us_part2.htm) The cockpit was painted Dull Dark Green (using Tamiya XF-5 Flat Green) and the remainder of the interior was coated in Zinc Chromate Yellow (Tamiya XF-4 Yellow Green), except for the bomb bay which was masked off and painted silver.

The most prominent specific feature would be the pilot and co-pilot's seats. I added harness from lead foil cut from the top of a wine bottle with fine wire buckles. The yellow life preserver cushions were simply pieces of Tamiya masking tape foled to the appropriate size.

## WEATHERING THE INTERIOR

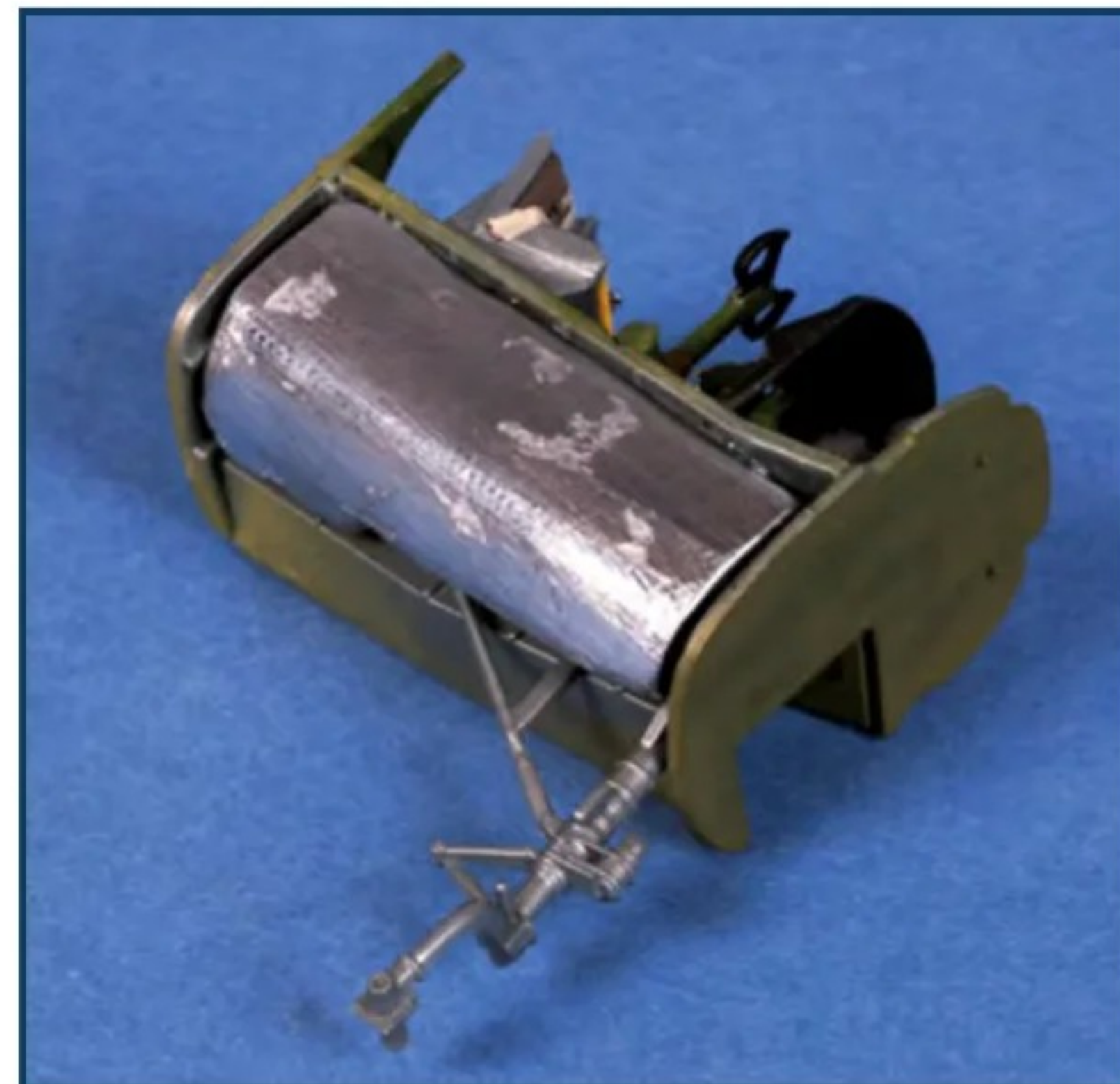
Weathering was applied reasonably heavily to permit some effect to be visible inside the dark recesses of the fuselage. First, the structural detail was highlighted with a thin spray of a black and red-brown mix. Next, details such as boxes, straps, switches and buttons were picked out with a fine brush. Finally, a wash of thinned raw umber and black oil paint mixed with odorless thinners was selectively applied to the edges of various surfaces.



"Terry Dean Nose Weights" produce a large chunk of lead that is custom built to fit inside the nose wheel bay of Monogram's B-25J. This is a welcome cure for tail-sitting!

Subsequent to all this painting, I found a source (on this very Forum) that suggested that the main interior colour was not actually zinc chromate yellow, but a custom mix of Zinc Chromate and approximately 10% black, resulting in a muddy olive green shade.

I decided to take an each-way bet. Rather than repainting the entire interior, I mixed up a batch of the new colour and sprayed it in the bombardier's and the rear gunner's compartments. ➤



The nose weight fits into the nose gear bay after some of the plastic structural detail has been carved away.

**"[INTERIOR] WEATHERING WAS APPLIED REASONABLY HEAVILY TO PERMIT SOME EFFECT TO BE VISIBLE INSIDE THE DARK RECESSES OF THE FUSELAGE..."**

The only additions to Monogram's interior parts were harness straps cut from lead foil. Otherwise, all the kit interior needs is a careful paint job. See Osprey Masterclass "Airbrushing and Finishing Scale Models" for more photos of the interior of this model.







The fuselage and wing parts are glued together and temporarily secured with Tamiya tape and various clamps.



The join for the fins has been reinforced with brass tube. Corresponding holes have been drilled into the horizontal tail.



A new smaller blast panel cut from sheet styrene plus the gun pack from Revell's 1:48 scale B-25D have been glued to the forward fuselage.

## BRINGING THE SUB-ASSEMBLIES TOGETHER

The time had come to encase all that painting and weathering between the fuselage halves, but not before ensuring that the nose wheel would stay on the ground when the model was finished.

This kit needs a lot of nose weight. Fortunately, Terry Dean Nose Weights offers a custom designed solution - a solid white metal weight designed to fit inside the forward wheel well. The main gear door is closed, so this chunk o' metal does not obscure any visible kit detail.

Test fitting of the nose weight suggested that it would be safer to trim the raised ribs off the wheel well ceiling. This offered a millimetre's more clearance and, more importantly, gave a flatter surface for a strong bond.

The nose weight was glued in place using super glue.

I was concerned that I might need more nose weight than standard as I had moved the centre of gravity aft when relocating the turret. I therefore packed a few lead fishing sinkers in front of the instrument panel as insurance. These spherical lead weights were squashed with pliers before installation to permit more to be fitted.

Now the fuselage and wing halves were

glued together and taped to set.

Monogram's one-piece engines look pretty ordinary on the sprue, but I did not want to introduce any after-market to the project at this late stage so I decided that they would do. They did look better again inside their nacelles.

I had a little trouble lining one of the engines up inside the nacelle. In fact, I had to break open the nacelle to correct a nasty lean that the engine had developed while setting.

The vertical tailplanes are each moulded with a long locating pin, but these had both broken off. I drilled a hole in the positions of the pins and installed brass tube to improve the bond between the tailplane parts. In the interests of consistency, I rescribed the small number of panel lines of the upper surface of the horizontal stabilisers, and both sides of each vertical stab.

After I had assembled the wings, I bit the bullet and determined to rescribe the upper surfaces of these large parts too. I took care to leave some raised details (such as small rectangular panels here and there) in place. Once again, self-adhesive Dymo tape was used as a guide but this time the raised panel lines were not sanded off until after the new

recessed lines were scribed. Once finished, the panel lines received a thin brushed coat of Tamiya Extra Thin Liquid Cement. This delivers a more consistent edge to the sharp, fine lines.

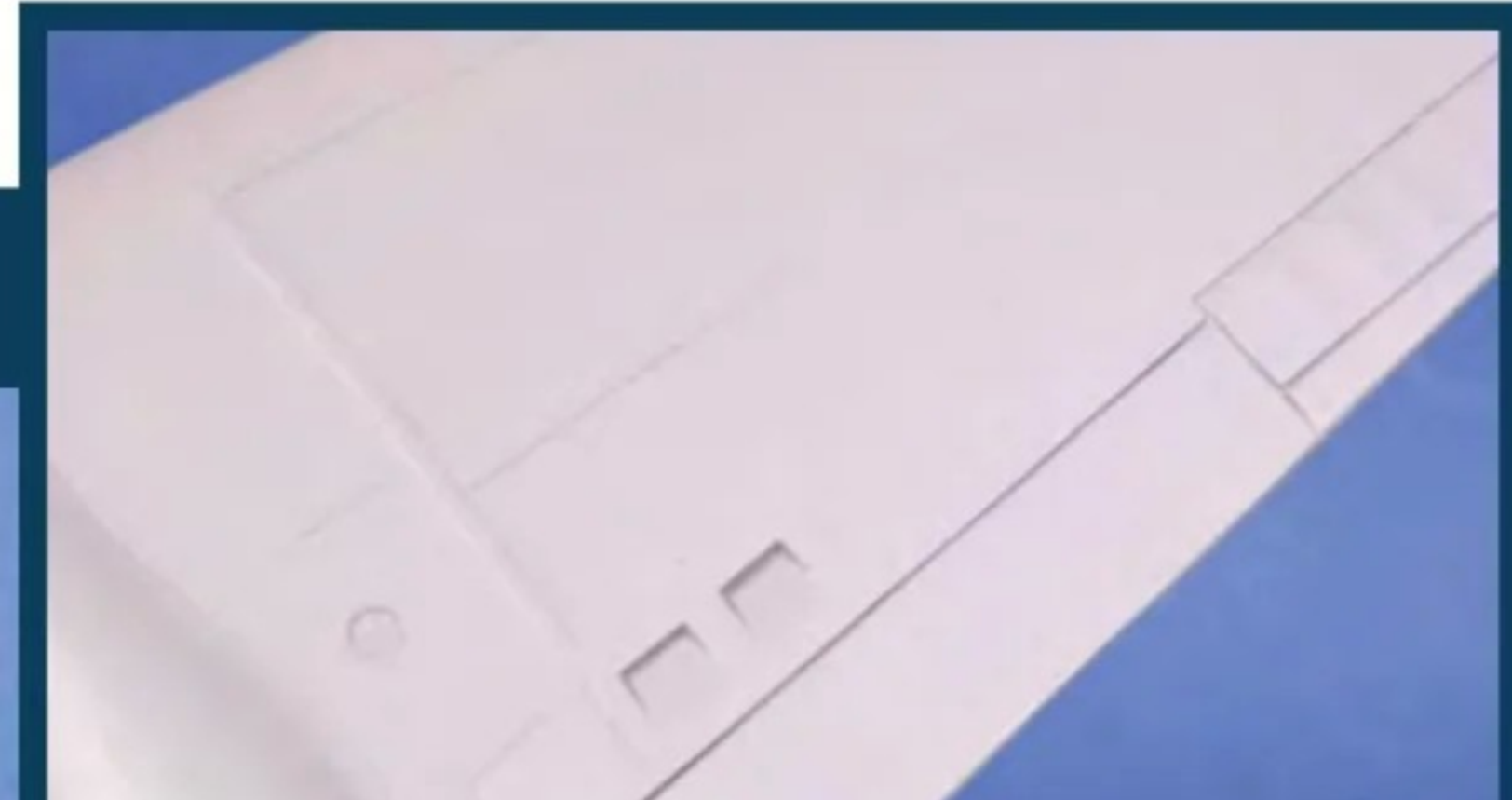
With the fuselage and wings now ready for final assembly, I added a few more conversion details. These included the nose gun packages from the Revell B-25C kit plus a piece of thin styrene cut to shape as new small blast panels forward of the guns on each side.

A piece of plastic rod was also flattened on one side and glued to the bottom of the nose. This represents a fume extractor tube fitted to these hybrid B-25Ds. When the glue has sent properly, I will scribe a line where the tube crosses the front main undercarriage door.

Fit of the main airframe components was generally pretty good.

I sanded the second round of Milliput, but the seam line on the upper fuselage join was particularly recalcitrant. I eventually terminated the seam with extreme prejudice using a coarse Mastercaster sanding stick to attack the entire spine, followed by progressively finer sanders to eliminate the deep sanding gouges.

I had to restore the scribed panel line detail



The raised panel lines on the wings were sanded off and scribed to match the newly recessed panel lines on the fuselage.

After all that hard graft, the model is finally starting to look like a Mitchell.





after this. The fuselage was primed again after the sanding was complete. The wings received a coat of Tamiya Primer after sanding too.

The fit of the wings to the fuselage was pretty good. The port wing was not quite thick enough, resulting in a narrow gap at the upper wing root, but I managed to cram some scrap plastic between the top and bottom join of the wing. This mostly fixed the problem. A swipe of Tamiya Surfacer resulted in a gap-free finish.

Main transparencies were now glued in place. The fit was pretty good. I have read some horror stories about the canopy and nose pieces, but the only problems I encountered were a very small gap at the front of the windscreen which was quickly dealt with using Krystal Kleer (white glue), and a gap/step on the port side of the fuselage nose where it (almost) meets the nose cap and the upper nose glazing.

The smaller windows and the astrodome hole were temporarily filled with Krystal Kleer as a masking agent to prevent overspray from entering the model. When the paint job was finished, the Krystal Kleer was pulled out and replaced with a fresh application to create the clear windows.

I drilled a second hole under the fixed machine gun position in the clear nose cap for the additional fixed gun carried by these hybrid B-25Ds. I glued the machine gun in the flexible position in the centre of the nose, but I cut the barrel off when it was completely set, and glued it back on when painting was complete (it had almost no chance of surviving the extensive handling during painting).

The nose and canopy transparencies were masked to avoid putty fingerprints on these pristine parts, and to reduce the risk of damage from later sanding.

Milliput was applied sparingly with a trowel (actually an old fashioned staple remover). As much excess putty as possible was wiped off the model with a damp fingertip while the putty was still pliable. This minimised the amount of sanding needed later.

When the Milliput had dried, I used 1000 grit Tamiya Abrasive Paper to sand and polish the filler. Although there seems to be quite a lot of Milliput around the nose and the canopy, the gaps were negligible. Even so, it was worth the extra time to properly fair in the canopy and nose, completely eliminating the small steps between the clear parts and the grey fuselage.

Eduard Mask set number EX 119 was used to mask the clear parts. In total, masking with these die-cut flexible masks took a little more than an hour - far less than the time that would have been required if I was cutting masks from tape, and more precise too. The canopy and other masked frames were painted the interior colour.

I also bought a rather dangerous looking Pounce Wheel while I was at an art shop, and decided to try it out on my Mitchell to add selected lines of rivets to the fuselage and the upper wings and tail planes. The spikes are widely spaced, but it works quite well. I used it very lightly for a subtle (i.e., almost invisible) riveting effect.

I also modified the rear machine gun cover by plugging the two holes, drilling one new one, and building up and reshaping the cover using Milliput. ➤



A few gaps and steps were present around the nose and windscreen glazings. The clear parts were masked and the flaws filled with Milliput. The putty was smoothed with a damp fingertip, then sanded and polished when set.



Eduard Mask set number EX 119 was used to mask the clear parts. In total, masking with these die-cut flexible masks took a little more than an hour.



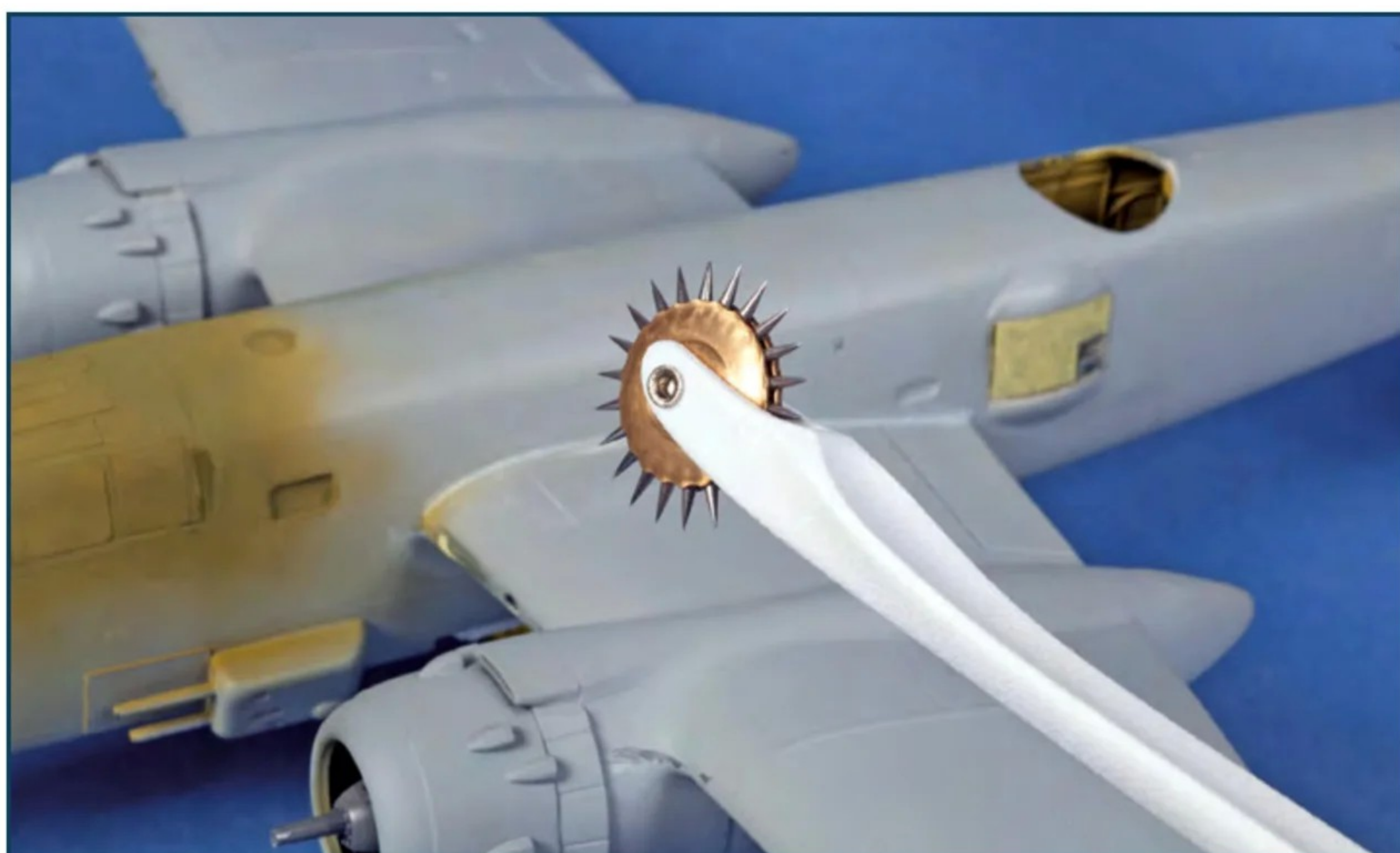
The other clear parts were masked with the Eduard set too. These masks were real time savers, and permitted razor sharp precision too.



The nose and windscreen clear parts were sprayed Interior Green before the camouflage coats were applied.



A "fabric" cover for the rear machine gun was fashioned from Milliput.



At this very late stage I decided to add some lines of recessed rivets to using a Pounce Wheel purchased from a local craft shop. The effect was subtle but a nice enhancement.





These camouflaged Mitchells suffered from extensive exhaust staining. Strips of self-adhesive aluminium foil was used for the turret framing.



The remnants of exhaust stains were also applied to the fins. Note the new window in the rear fuselage.



Markings were sourced from Aussie Decals.

## PAINTING

I spent a few hours getting the basic colours onto my B-25D. The lower surface was painted Tamiya Neutral Grey before being broken up with a mottle of a 50/50 mix of the Neutral Grey and Tamiya Sky Grey.

The base colour for the upper surface was Xrtacylics' Olive Drab.

This dark shade was broken up with pale streaks and oversprays on the upper surface. A lighter version of the colour was also sprayed onto the control surfaces, as the fabric faded much faster than the rest of the airframe.

Some RAAF Mitchells in 1945 featured overpainted roundels. The new style was smaller, so a dark patch of fresh Olive Drab or Foliage Green could be seen under the new roundels. These were masked and sprayed onto the paintwork before decals were applied.

These aircraft featured lots of dark stains and massive chalky exhaust streaks, but I did not add these until the decals have been applied.

Polly Scale Flat acrylic was applied over the decals and the glossy paint, immediately improving the appearance of the Olive Drab finish to my eye.

I post shaded the upper wings and part of the fuselage with panel highlighting, chordwise streaks and random spots using a very thin mix of Tamiya Red Brown and Flat Black.

The model was finally looking something like I had visualised. I was getting worried that even my faded version of Olive Drab would be too dark, but the Polly Scale Flat coat and the first stage of weathering have restored my confidence in the paint job.

The panel structure of these weary and weathered Mitchells is very obvious in wartime photos so I feel that I have been given license to go slightly nuts. But just slightly.

I thought that I had covered the gap at the wing root but the flat coat revealed a persistent seam line. Rather than putty and sand, I decided to fill this narrow seam with Testor's Clear Parts Cement. This is a water soluble white glue that is thinner than Krystal Kleer and can be applied straight from a narrow plastic tube attached to the bottle. I thought that it might be an effective way to fill the gap without the risk of damaging the surrounding plastic.

You can see the just-applied Testor's Clear Parts Cement on the wing root in the photos.

Some may think that the weathering looks too stark and architectural, especially the panel and hinge lines, but I have more than a few photos of these Aussie Mitchells in flight over Pacific islands and they did really look like this. If anything, my rendition is subdued.

If you happen to have Stewart Wilson's book, "Boston, Mitchell and Liberator in Australian Service", check the photos on pages 71 and 78 to see what I mean.

The chalky exhaust stain was also typical of 2 Sqn RAAF B-25s. These were applied first as narrow streaks of Tamiya XF-57 Buff, thinned heavily and sprayed straight behind each exhaust ejector, then gradually built up and flared out to finally join as one large stain at the ends of the top and bottom of the engine nacelles. Tamiya XF-55 Deck Tan, an even paler colour, was then used to emphasise the more directed stains directly behind the ejectors. The ubiquitous Red Brown / Black mix was applied very lightly at the edges of the pale stain and in a couple of streaks.



The pale streaks were also extended to subtler applications on the horizontal and vertical tail planes.

A fresh batch of unfaded Olive Drab was used to paint over the repair to the wing root, much in the same way as it might have on the real aircraft. I left the obvious repair visible, and added a couple of repair "patches" on the wings using the same batch of paint.

Painting of this model is described in detail in more detail in the earlier Osprey Masterclass title, "Airbrushing and Finishing Scale Models."

## FINISHING TOUCHES

I sourced an astrodome from Squadron's B-25C/D vacform canopy set. The astrodome was cut out of the sheet and the base was sanded off with a coarse Mastercater sander. The vacform part was masked with Tamiya tape and glued on top of the astrodome opening on the forward fuselage before a gap on each side of the clear dome was filled with Krystal Kleer, and the frame/base painted with Olive Drab.

The DF football was also relocated onto the upper forward fuselage, and holes were drilled fore and aft for the two short antenna masts.

Detail parts such as the main undercarriage, wheels, propellers, bomb bay doors and entry hatches were painted and weathered in preparation for final assembly. The detail of these parts was very good. I especially liked the intricate wheel hubs.

The Eduard masks were removed from the canopies. The new fuselage windows that I temporarily blocked off with Krystal Kleer took a bit of effort to open and clean up. The Krystal Kleer having been applied a few months ago, combined with the paint, led to a stubborn masking medium. By contrast, the new rear windows masked with Tamiya tape (the windows were oversized pieces of flat plastic from a CD jewel case, then these were faired in and the actual window size was

masked inside and out), worked like a charm.

Nearly there now... but it always seems to take longer than you'd expect to completely finish off that last 1%.

The control surface hinge lines, scribed panel lines and other structural details were subtly highlighted with Tamiya acrylic Semi-Gloss Black, thinned heavily with water and used as a pinpoint wash applied with a fine brush.

Antenna masts were cut from brass rod, painted and glued into pre-drilled holes on top of the fuselage. The antenna wire is nylon monofilament (invisible mending thread).

Machine gun barrels were painted gloss black and installed. Installing the waist guns in the assembled fuselage was a little fiddly, but doable using a hemostat (long, self closing tweezers).

The undercarriage did not present any major hurdles, but I was worried that the main gear legs were not going to fit inside the closed nacelles. They did in the end though.

Next time I will secure the main wheels with super glue, as the plastic cement I used was not rigid enough to prevent the wheels bowing out on their axles under the heavy weight of the model.

The turret framing you see here is "Plan B". These turrets seem to often feature clear Perspex framing, and I wanted to depict this. The easiest method would have been just to leave the top of the turret unpainted, but the framing is usually visible in photographs so I wanted to emphasise them somehow. I therefore masked the turret and painted the frames with Polly Scale Flat. This achieved the frosted effect that I was looking for.

I thought that if I dipped the canopy in Future, it would look as if these frosted frames were underneath the thin Perspex dome. Nice theory, but the Future completely wiped out the effect – the whole turret just looked like clear plastic again! "Plan B" was therefore put into effect. A number of photos of these Aussie

B-25Ds show highly reflective turret framing, so I cut thin slices of self-adhesive foil to use as the individual frames.

Once the entire model was assembled I was still not happy with the exhaust stain, deciding that my original depiction was underemphasized compared to reference photos. This prominent area was revisited. First, a new outline of a dark exhaust stain was laid down. Next, a 50/50 mix of Tamiya Buff and Deck Tan was thinned with alcohol (around 80% thinner to paint) and sprayed carefully and very directionally behind the exhaust ejectors. I was happier with this effect.

The exhaust stain was also re-emphasized on the vertical tail surfaces. The new rear fuselage window made from a piece of clear CD jewel case can also be seen to good effect in the photos.

Silver pencil was used to add some chipping to the upper wing roots and the leading edge of the wings and engine cowlings.

I was fairly satisfied with the result of this major conversion project, but I do realise that there are a number of notable inaccuracies that I would address differently next time:

- Top of canopy framing is incorrect for a D (should be more Perspex exposed)
- Co-pilot seat is incorrect
- Shoulder harnesses were not used on wartime aircraft
- Does not have the "broken back" of the B/C/D, and therefore...
- Style and size of rear gunner's blister and .50 cal mount is wrong
- Not really happy with Krystal Kleer windows
- Should have added some more weathering and detail inside nose – highly visible
- Decal codes slightly too small and not entirely correct style
- Canopy and nose frames need highlighting

Even so, this project was a great test bed for old-fashioned techniques. •

The shape and dimensions of the Monogram B-25 are excellent, resulting in a good representation of this iconic aircraft.







Markings for 14 varied subjects are included.

## KIT PREVIEW

# GUSTAV!

The Messerschmitt Bf 109 G series, or Gustav, was introduced in mid-1942

The Messerschmitt Bf 109 G-1 through G-4 differed only in minor details from the Bf 109 F, most notably in the more powerful 1,475 PS (1,085 kW; 1,455 hp) DB 605 engine.

The G-6 and pressurised G-5 were next. These were easily identified by the large bulges on the rear of the engine cowl.

Long-range photo-reconnaissance and tropical variants were also produced.

Eduard three its hat into the ring with a 1:72 scale Bf 109 G-2 and G-4 kit Limited Dual Combo offering.

Now, Eduard introduces their new 1:72 scale Bf 109 G-5 / 6 offering with two full kits in the box.

Eduard's debut 1:72 scale Messerschmitt Bf 109 was the Bf 109 F-2 & Bf 109 F-4 Wunderschöne Neue Maschinen Pt. 1 Limited Edition Dual Combo, released earlier in 2023. Wunderschöne Neue Maschinen Pt. 2 was launched in November 2023, covering the Bf 109 G-2 and G-4.

Now we have Eduard's new GUSTAV package - Messerschmitt Bf 109 G-5 / 6.

The kit includes parts for two complete models. You can build one of each or two of the same variants - ultimate flexibility.

Some of the many spare parts in the box

will permit you to build a Bf 109 G-14 too, or a Bf 109 G-6 with tall tail and / or clear vision Erla canopy and / or long tail wheel strut.

Eduard's 1:72 scale GUSTAV Dual Combo package comprises 310 parts in grey plastic (many marked not for use), 26 parts in clear plastic, 2 x colour photo-etched fret, 1 x brass coated photo-etched fret with 86 parts, die-cut self-adhesive masking sheet, 3 x decal sheets with 14 marking options and stencils plus a 40 page instruction book.

Two identical sprues are supplied for the Bf 109 G-5 / 6

Surface detail is truly gorgeous. The mid-dark grey plastic colour really shows off the crisp recessed panel lines and rows of rivets.

The recessed rivets are some of the best I have ever seen in this scale.

Stitching and fabric tape are depicted on fabric control surfaces.

Partial raised cockpit sidewall detail is moulded onto the inside of each fuselage half.

This is supplemented with additional plastic parts and colour photo-etch.

The plastic floor part has rudder pedals moulded in place. The kit supplies the conventional bucket seat and pressed metal backrest.

Three photo-etched frets are supplied.

The first two are colour photo-etched fret that mainly focuses on the cockpit. They are very subtly different. This photo-etched fret is pre-coloured and offers a layered instrument panel, half-tone harness straps, rudder pedals and other cockpit details.

I particularly like the red and white segmented trim wheel - that will save some tricky painting!

The halftone shading on the harness straps look great, even in this small scale.

The second photo-etched set is brass plated and features a myriad of parts for the exterior and the cockpit.

Alternative plastic parts are provided in case you don't like working with photo-etch. Two instrument panel decal overlays are also offered as an option to painting the plastic panel.

In common with its 1:48 scale cousin, this kit also features a clear fuel line for the starboard cockpit sidewall.

External details are included too, including mesh radiator faces.

The fuselage halves are full length. The vertical tail is a separate part. It features a long locating tab that should ensure robust fit.

Horizontal tailplanes are moulded as a single part including the elevators.

Wings are conventional and will look familiar

The full length fuselage.







Sidewall detail is moulded onto the inside of the fuselage.



The port cockpit sidewall.



Deep recessed for the supercharger intake and the cannon beule.



The kidney-shaped bulge on top of the wing is typical for the Bf 109 G-5 and G-6.



Wheel well sidewalls are supplied as one part per side.



Subtle fabric rendition.



Rudder.



The standard G-6 fin.



The undercarriage legs feature a long and robust locating peg at the top.



Separate leading edge slats may be posed dropped or raised.



Cockpit detail looks great straight from the box.

to anyone who has built Eduard's 1:48 scale Bf 109 G kits. The lower half is full span, while the uppers are split into port and starboard. Wheel well structural detail is moulded onto the inside of the upper wing. Wheel well and gear leg sidewalls are a simple single piece for each side.

Pay attention to the instructions here as you may need to drill out holes for the version that you are building.

Landing flaps, ailerons and leading edge slats are all separate parts. The flaps are designed to be displayed dropped, but it will be a simple matter to cut off the locating tabs and reposition them. It looks like the slats are designed to be dropped too, but once again if you'd prefer them retracted you can cut off the tabs.

The radiator flaps are moulded shut.

The pitot tube is moulded to the wing leading edge. This is inevitably delicate and Eduard has provided insurance in the form of a separate pitot tube on the sprues. I'll be cutting off the moulded-on parts and using this separate pitot tube for my build. Thanks Eduard!

Other options include bomb and centreline rack; two styles of centreline drop tank, tropical filter, under wing cannon gondolas,

alternative propellers and exhausts, several versions of wheels and hubs and various styles of long or short tail wheel. Some of these are marked "not for use" but will be relevant to later releases.

Unlike Eduard's 1:48 scale Bf 109 kits, the undercarriage legs of these 1:72 scale Gustavs are moulded with deep locating pegs that should guarantee a robust join plus accurate splay and rake. I'd like to see this nice design feature upscaled for future Eduard Bf 109 releases in all scales.

26 clear parts are supplied on a single sprue. Most of these are not referred to in the instructions, but with the inclusion of the tall tail and alternative rudders, the tall tail wheel and the three styles of Erla canopies on the sprue, you'll be able to build a late G-6 or a G-14 straight from the box. All you need is decals!

Clear parts include the three-part canopy, the clear cockpit fuel line, gunsight and wing tip navigation lights.

The parts are thin and clear.

Markings are supplied for a generous 14 colour schemes and markings.

With its widespread service on the Western Front, the Eastern Front and the

Mediterranean, the Messerschmitt Bf 109 G-6 had some of the widest camouflage schemes of this famous family.

The unique and national markings are supplied on one large decal sheet.

Two smaller sheets provide the stencil markings.

## CONCLUSION

Eduard expands their gorgeous family of small scale Bf 109s with this new Messerschmitt Bf 109 G-5 / G-6 release.

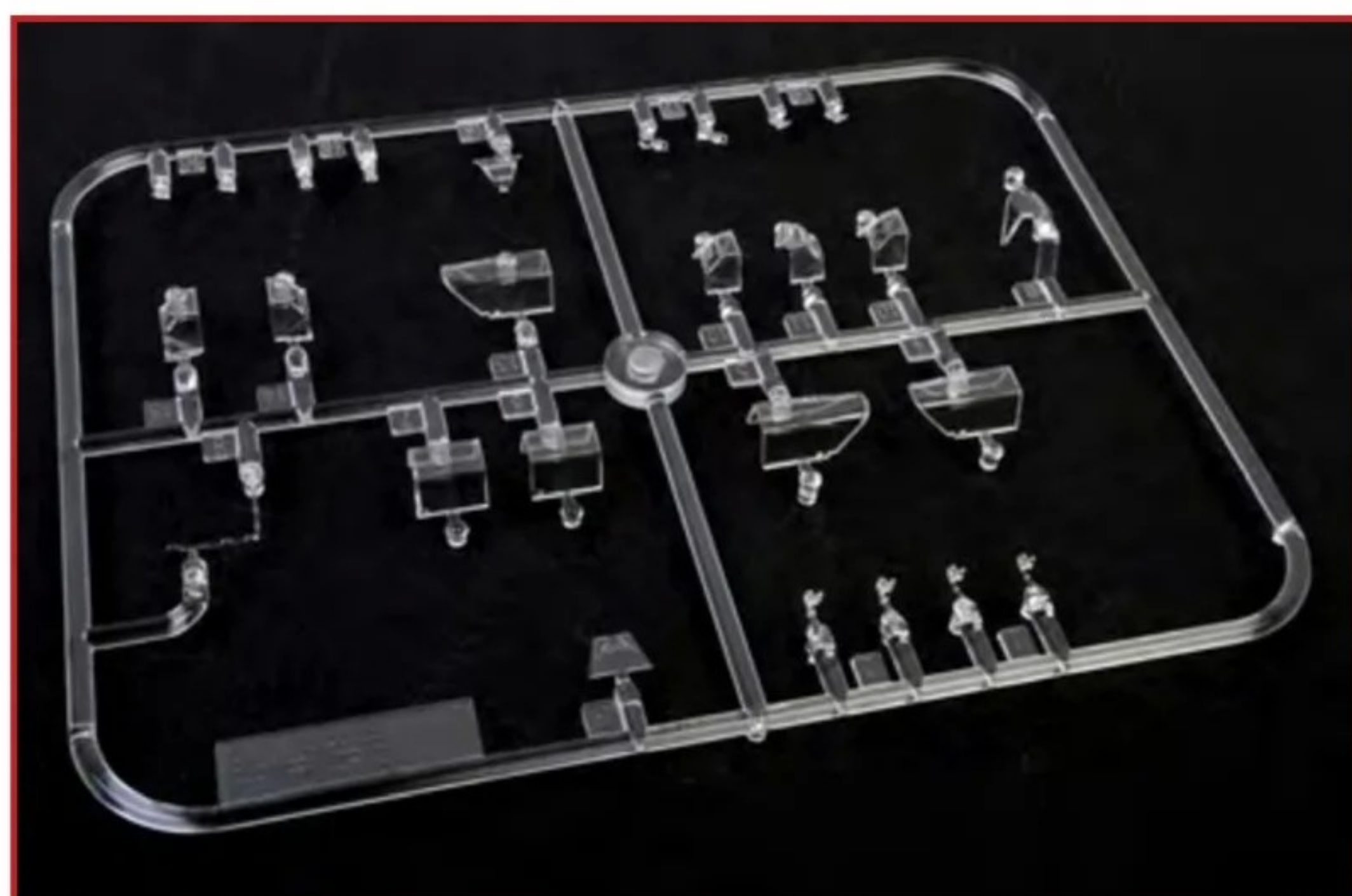
With its incredibly fine surface textures, an impressive level of detail with no compromise considering its small scale and many useful options, this little gem will be hard to keep in the box.

The bonus tall tail, Erla canopy, battery box cover and tall tail wheel strut offers even greater choice and flexibility.

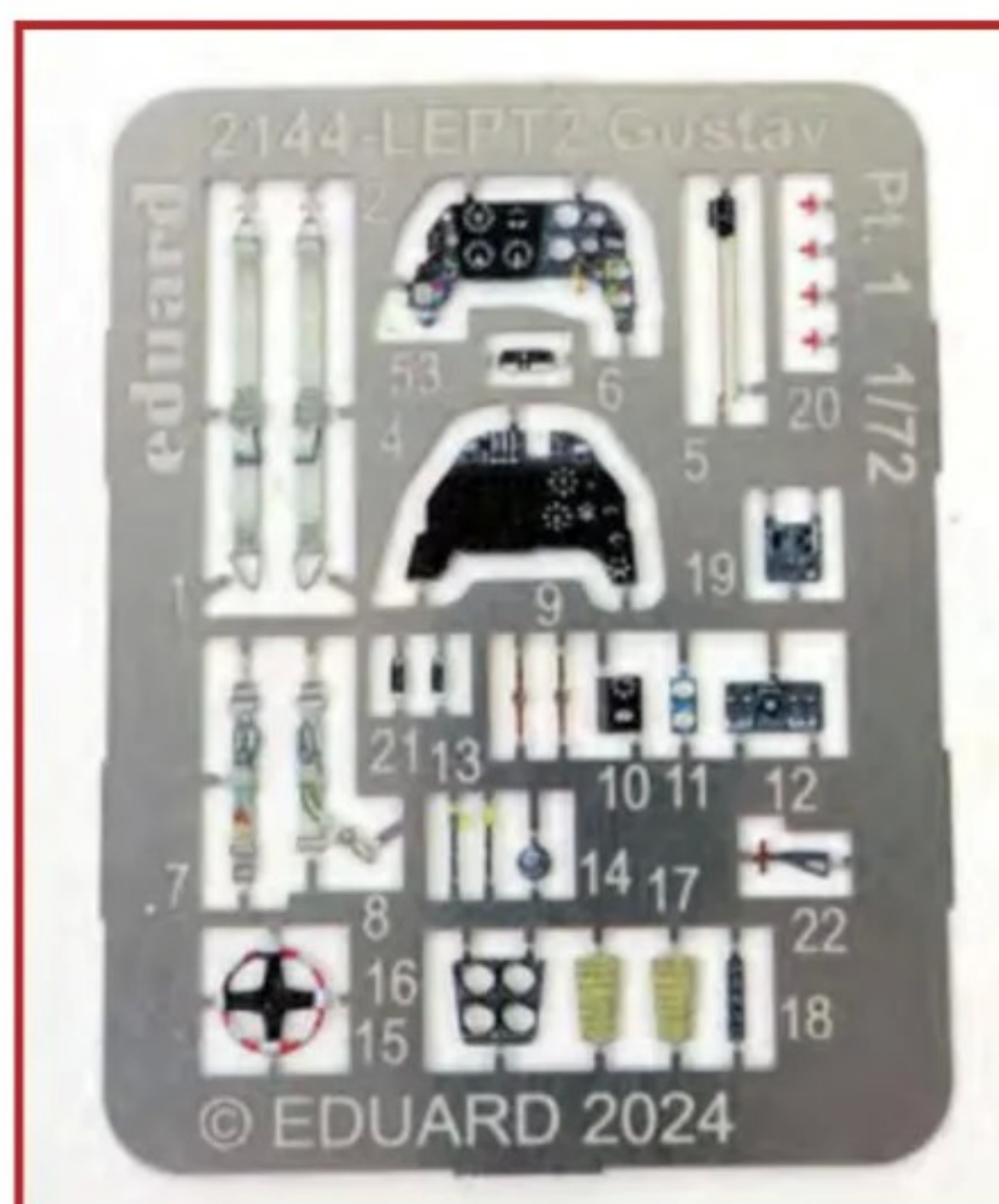
This is the ultimate 1:72 scale Bf 109 G-5 / 6 toolbox.

USD\$44.95 really is outstanding value too. •

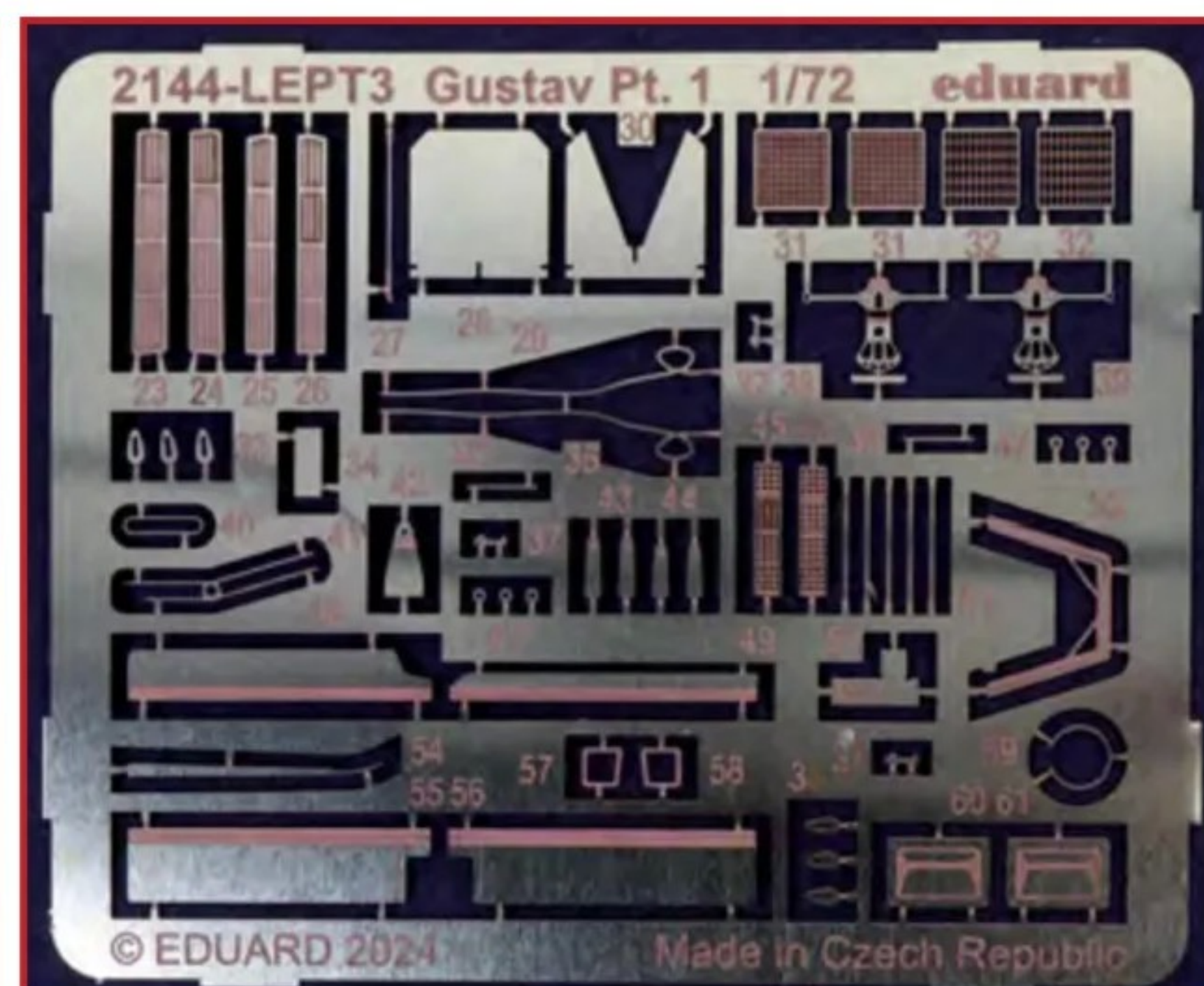
Thanks to Eduard for the sample  
[www.eduard.com](http://www.eduard.com)



The kit's clear sprue.



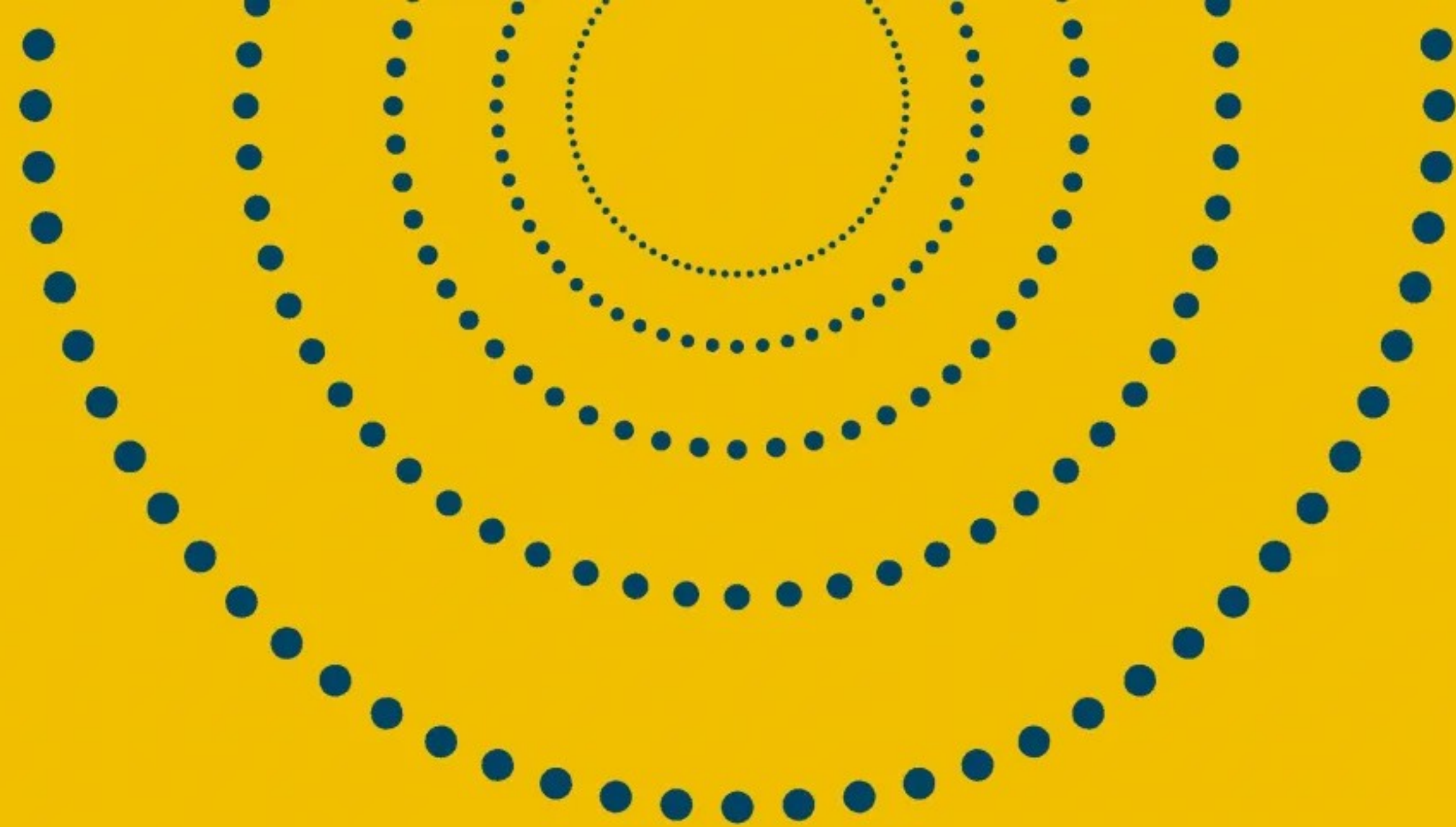
Colour photo-etch...



...and a second brass fret.



# military illustrated modeller



## SQUADRON BOOKS



### NEW

#### 39009 VIETNAM GUN TRUCKS

Squadron Signal Publications is proud to present its first new vehicle book release from the new Georgia Squadron location. The Vietnam Gun Trucks "Detail In Action" includes all the best parts from the "In Action" and the "Walk Around" series combined into one book! PLUS, this book features 144 pages! This book is written by author David Doyle. Cover artwork is done by Antonis Karidis.

### NEW

#### 10269 F-16 FIGHTING FALCON

Squadron Signal Publications continues it's new book releases from the new Georgia Squadron location with this revised and expanded 80 page full colour F-16 Fighting Falcon in Action. This book is written by author David Doyle. Illustrations are done by Mark Tutton and the cover (front and back) artwork is done by Piotr Forkasiewicz. This books is 80 pages full colour.

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## Military Illustrated Modeller Issue 152 AFV Edition on sale 18th April 2024



### REAP THE WIRBELWIND

1:35 Flakpanzer IV 'Wirbelwind' from Dragon



### FUNKY FERRET

Modelling references for the Airfix  
1:35 Ferret Armoured Car Mk.2



### STRYKER MATCH

Miniature modern modelling with  
Dragon's 1:72 M1128  
Stryker MGS

## Military Illustrated Modeller Issue 153 Aircraft Edition on sale 17th May 2024



### GUSTAV

Eduard's new 1:72 scale  
Messerschmitt Bf 109 G-6



### HAVE TANK, WILL TRAVEL

Dora Wings' 1:48 scale P-47C  
Thunderbolt by Brett Green



### BF 109 G-6 CLOSE-UP

Behind the scenes at the Australian War Memorial



### SILENT DESTRUCTION

Dragon 1:35 A4 / V-2 by Brett Green,  
Painted by Chris Wauchop

...AND MORE!





## TYPHOONS STRIKE MILITARY TARGETS IN YEMEN

**R**oyal Air Force FGR4 Typhoons have returned to RAF Akrotiri after conducting precision strikes against two Houthi military targets in Yemen.

Four RAF Typhoon FGR4s, supported by a Voyager air refuelling tanker therefore used Paveway IV guided bombs to conduct precision strikes on two of these Houthi facilities. One was a site at Bani in north-western Yemen used to launch reconnaissance and attack drones.

A number of buildings involved in drone operations were targeted by the RAF. The other location struck by was the airfield at Abbs. Intelligence has shown that it has been used to launch both cruise missiles and drones over the Red Sea.

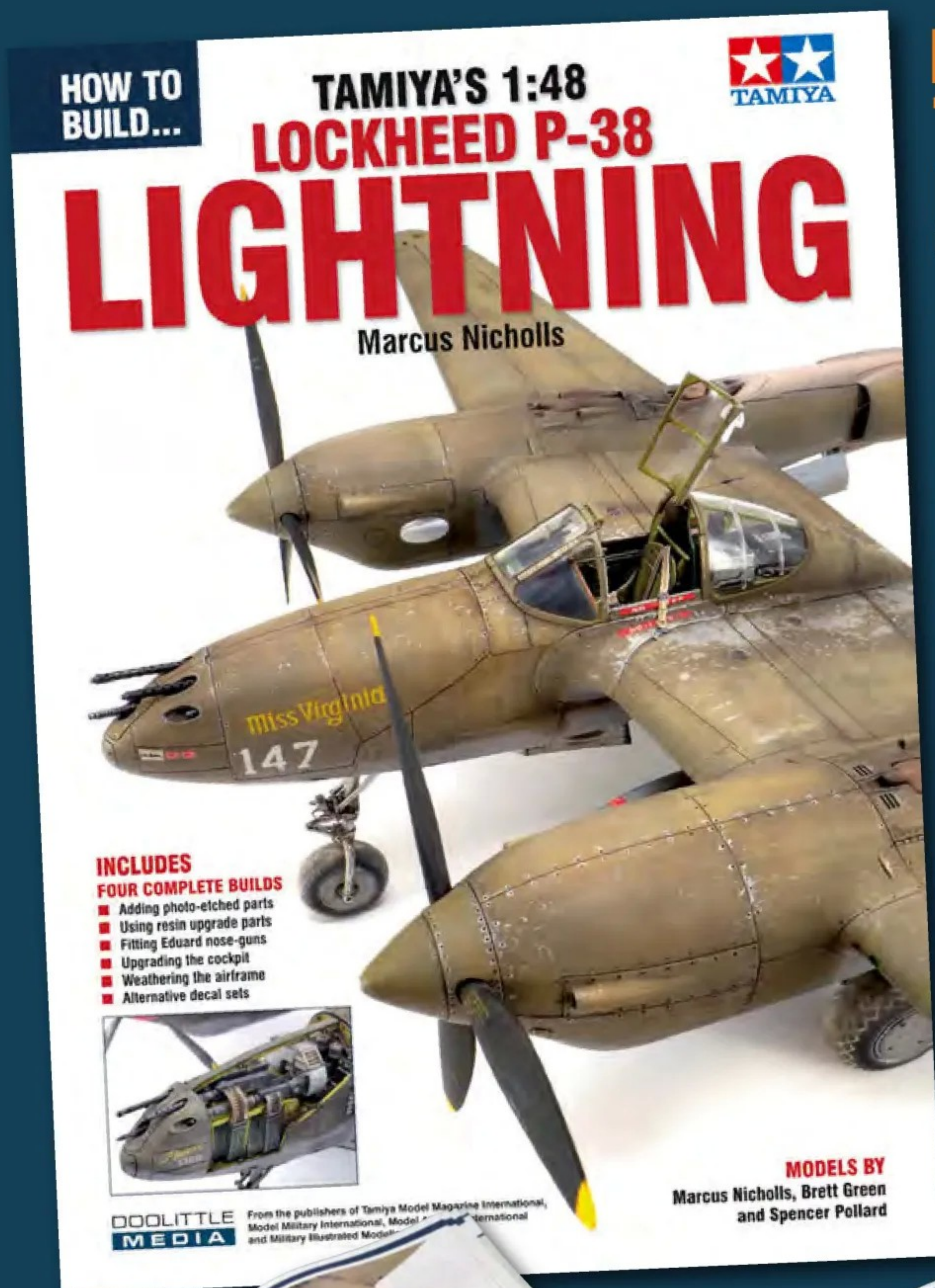
Several key targets at the airfield were identified and prosecuted. In planning the strikes, particular care was taken to minimise any risks to civilians, and any such risks were mitigated further by the decision to conduct the strikes during the night.

The detailed results of the strikes are being assessed, but early indications are that the Houthis' ability to threaten merchant shipping has taken a blow, and our commitment to protecting the sea-lanes, through which some 15% of the world's shipping passes and which is vital to the global economy, has been amply demonstrated. •





# NEW from the 'HOW TO BUILD...' series



## How to Build... TAMIYA'S 1:48 LOCKHEED P-38F/G LIGHTNING

By Marcus Nicholls

The Lockheed P-38 Lightning is an iconic US fighter from the Second World War. Its twin Allison V12 engines were mounted in booms to free-up the nose so it could house a fearsome array of four M2 Browning machine guns and a 20mm cannon. The twin-boom airframe became a sight feared by enemies wherever it served, with good reason.

In 2019, after several years of painstaking research, Tamiya released an all-new kit of this sleek aircraft and it has taken its place proudly in the 1:48 Aircraft Series as No.120 in the range.

In this new 'How To Build' book, Tamiya Model Magazine's Editor, Marcus Nicholls, presents no less than four built-up examples of Tamiya's fantastic model; one Lightning each from Brett Green and Spencer Pollard, plus two from Marcus Nicholls.

The second of Marcus's models incorporates resin and photo-etched super-detail sets from Eduard, showing how they can be used within the build to take the detail to an even higher level. New photos of the other models show how Brett Green and Spencer Pollard built and painted the models in their own styles.

The book includes four complete builds, covering the following topics:

- Adding photo-etched parts
- Using resin upgrade components
- Extending the nose undercarriage leg
- Upgrading the cockpit detail
- Weathering the airframe
- Alternative decal sets

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MILITARY MINIATURE SERIES

1/48 Military Miniature Series  
**British 2-Ton 4x2 Ambulance**  
(Item 32605)



1/48 Aircraft Series  
**Avro Lancaster B Mk.I/III**  
(Item 61112)

The aircraft model kit is sold separately.

# An Unsung Royal Air Force Hero

## 1/48 Military Miniature Series **British 2-Ton 4x2 Ambulance** (Item 32605)

From 1942 to the end of WWII, the British bomber aircraft Avro Lancaster flew to the mainland of Germany 107,085 times and dropped 608,612 tons of bombs, which contributed to the German surrender. On the other hand, the Royal Air Force lost over 3,000 aircraft, and many Lancasters came back with injured crew, who were often welcomed back by the British 2-Ton 4x2 Ambulance which served on Royal Air Force bases with the Medical Corps. Now, Tamiya welcomes this ambulance into the extensive 1/48 Military Miniature Series! Dioramas with 1/48 kits such as the Avro Lancaster B Mk.I/III and the Cromwell Mk.IV Cruiser Tank will expand your modeling world.

★The truck-based form is authentically captured. ★Comes with a driver figure and two marking options. ★Features succinctly and realistically depicted suspension. ★Clear parts recreate headlights and windshield.

Length: 119mm  
Width: 48mm



### Painting the British 2-Ton 4x2 Ambulance

- XF-58 Olive Green
- XF-85 Rubber Black

Tamiya Color Acrylic Mini Paints /  
Tamiya Color Enamel Paints (XF)

Make dioramas with 1/48 Military Miniature Series and 1/48 Aircraft Series models!

**1/48  
SCALE**



**Cromwell Mk.IV British Cruiser Tank Mk.VIII, A27M** (Item 32528)



**British Sherman IC Firefly** (Item 32532)



**British Tank Churchill Mk.VII Crocodile** (Item 32594)



**British Light Utility Car 10HP** (Item 32562)



**WWII British Infantry Set (European Campaign)** (Item 32526)



**Supermarine Spitfire Mk.I** (Item 61119)



**De Havilland Mosquito FB Mk.VI/NF Mk.II** (Item 61062)

★Images show assembled and painted kits.  
★Product may vary from images shown.

Check Tamiya's homepage for the latest releases! [www.tamiya.com](http://www.tamiya.com)

